08:30 - 09:00: Opening Ceremony (Room H202)

09:00 - 10:00: Plenary Talk 1 (Room H202)
*Spectrum of Rule Algorithms: From Classical, through Multiple-instance, to One-class*
Speaker: Krzysztof (Krys) Cios, Virginia Commonwealth University, USA

10:00 - 10:30: Coffee Break

10:30 - 13:00: NaBIC Session I - Global Optimization (Room H202)
Chair: E. J. Solteiro Pires and Mauro Castelli

- **A Hybrid Harmony Search Algorithm with Variable Neighbourhood Search for the Bin-Packing Problem**
  Mauro Castelli and Leonardo Vanneschi

- **Implementing Flower Multi-objective Algorithm for selection of University academic credits**
  C. Alberto Ochoa-Zezatti

- **Diversity study of Multi-Objective Genetic Algorithm based on Shannon Entropy**
  E. J. Solteiro Pires, J. A. Tenreiro Machado and P. B. de Moura Oliveira

- **Performance Analysis of Multiobjective Artificial Bee Colony Implementations for Phylogenetic Reconstruction**
  Sergio Santander-Jiménez and Miguel A. Vega-Rodríguez

- **On The Efficiency of Multi-core Grammatical Evolution (MCGE) Evolving Multi-Core Parallel Programs**
  Gopinath Chennupati

- **Demonstrating the Power of Object-Oriented Genetic Programming via the Inference of Graph Models for Complex Networks**
  Michael Medland, Kyle Harrison and Beatrice Ombuki-Berman

- **Multiobjective optimization for Volt/THD problem in Distribution System**
  Angelo Almeida, Franklin Pamplona, Helon Braz, José Silva and Luciano Barros

- An Experimental Analysis of the Echo State Network Initialization Using the Particle Swarm Optimization
  Sebastián Basterrech, Enrique Alba and Vaclav Snasel
13:00 - 14:00: Lunch Break

14:00 - 15:00: Plenary Talk II (Room H202)
*Hyper-heuristics: Automatic Design of Optimization Algorithms with Grammatical Evolution*
Francisco B. Pereira, Instituto Superior de Engenharia de Coimbra, Portugal

15:00 - 16:00: NaBIC Session II - Intelligent Applications (Room H202)
Chair: Pedro Machado and Habiba Drias

*Towards an autonomous multistate biomolecular devices built on DNA*
Tadeusz Krasiski, Sebastian Sakowski and Tomasz Popawski

*Studying the Reporting Cells Strategy in a Realistic Mobile Environment*
Víctor Berrocal-Plaza, Miguel Ángel Vega-Rodríguez and Juan Manuel Sánchez-Pérez

*Archives-holding XCS Classifier System: A Preliminary Study*
Takahiro Komine, Masaya Nakata and Keiki Takadama

*Si elegans: FPGA Hardware Emulation of C. elegans Nematode Nervous System*
Pedro Machado, John Wade and Martin McGinnity

*Genetic Algorithm versus Memetic algorithm for Association Rules Mining*
Habiba Drias

16:00 - 16:20: Coffee Break

16:20 - 18:00: NaBIC Session III - Intelligent Applications (Room H202)
Chair: R. Muhammad Atif Azad and Ivo Pereira

*A Perturbation and Observation Routine Used To Control A Power Converter*
Tiago Santos and Acácio Galhardo

*Fuzzy Linguistic Controllers Applied to Decouple Control Loop Effects*
João Calado and Andrei Sousa

*Information Acquisition Performance by Supervised Information-Theoretic Self-Organizing Maps*
Ryotaro Kamimura

*Efficient Approaches to Interleaved Sampling of training data for Symbolic Regression*
R. Muhammad Atif Azad, David Medernach and Conor Ryan

*A Multi-Objective Imperialist Competitive Algorithm to Solve a New Multi-Modal Tree Hub Location Problem*
Reza Tavakkoli-Moghaddam and Samaneh Sedehzadeh
July 31, 2014

08:30 - 09:30: Plenary Talk III (Room H202) - Biologically Inspired Algorithms for Speech Based Interfaces
Speaker: Luis Coelho, Escola Superior de Estudos Industriais e de Gestão, Portugal

09:30 - 10:00: Coffee Break

10:00 - 13:00: CASoN Session I - Social Networks (Room H207)
Chair: Manuel Grana and Darko Obradovic

Direct Generation of Random Graphs Exactly Realising a Prescribed Degree Sequence
Darko Obradovic and Maximilien Danisch

Community Detection on Heterogeneous Networks by Multiple Semantic-Path Clustering
Qinxue Meng, Paul Kennedy and Siamak Tafavogh

An ANP-based Method for Modeling Centrality in Online Social Networks
Rafael Giordano Vieira, Fernanda Sales Bittencourt de Lemos and Janine Kniess

Group Adjacency Matrices: Effective Visualisation of Community Structure in Large Networks
Darko Obradovic

Recipe tuning by Reinforcement Learning in the SandS ecosystem
Borja Fernandez-Gauna and Manuel Grana

10:00 - 11:00: NaBIC Session IV- Data Mining (Room H202)
Chair: Parimala Thulasiraman and Jorge M. Santos

Reusable Knowledge by Linkage-Classifier in Accuracy-based Learning Classifier System
Kotaro Usui, Masaya Nakata and Keiki Takadama

Portfolio Diversification Using Ant Brood Sorting Clustering
Ruppa Thulasiram, Parimala Thulasiraman and Olayinka Idowu Oduntan

Incremental clustering of data stream using real ants behavior
Nesrine Masmoudi, Hanane Azzag, Mustapha Lebbah and Cyrille Bertelle

11:00 - 13:00: NaBIC Session V- Scheduling (Room H202)
Chair: Leonilde Varela and João Paulo Pereira

An Ordered Approach to Minimum Completion Time in Unrelated Parallel- Machines for the Makespan Optimization
André Serra Santos, Ana Maria Madureira and Maria Leonilde Varela

Alternative Approaches Analysis for Scheduling in an Extended Manufacturing Environment
André Serra Santos, Maria Leonilde Varela, Goran D. Putnik and Ana Maria Madureira
An Architecture for User Modeling on Intelligent and Adaptive Scheduling Systems
Ana Madureira, Bruno Cunha, João Pereira Pereira, Ivo Pereira and Silvia Gomes

Energy Optimization for Task Scheduling in Distributed Systems by an Artificial Bee Colony Approach
Maria Arsuaga-Ríos and Miguel Ángel Vega Rodríguez

Prototype of an Adaptive Decision Support System for Interactive Scheduling with MetaCognition and User Modeling Experience
Ana Madureira, Silvia Gomes, Bruno Cunha, João Pereira, Jorge Santos and Ivo Pereira

Scheduling Single-machine Problem based on Just-In-Time Principles
Joana Dantas and Leonilde Varela

13:00 - 14:00: Lunch Break

14:00 - 15:00: Plenary Talk IV (Room H202) - So, What's New About Social Networks?
Benjamim Fonseca, University of Trás-os-Montes e Alto Douro, Portugal

15:00 - 16:00: NaBIC Session VI – Scheduling (Room H202)
Chair: Ana Madureira and Luis Coelho

Comparative Analysis of Scheduling Rules through Arena for Parallel Machines - A Case Study
Filipa Teixeira, Lara Oliveira and Leonilde Varela

Scheduling in Product Oriented Manufacturing Systems - Comparing hybrid flowshop with parallel-machine flowshop: an industrial study
Natália Costa, Leonilde Varela and Silvio Carmo-Silva

Parallel Machines Scheduling with Fuzzy Simulated Annealing
André Serra Santos, Maria Leonilde Varela, Ana Maria Madureira and Rita A. Ribeiro

Manufacturing Rush Orders Rescheduling: a Supervised Learning based Approach
Ana Madureira, Jorge Santos, Silvia Gomes, João P. Pereira and Ivo Pereira

15:00 - 16:00: NaBIC Session VII - Hybrid Systems (Room H207)
Chair: Nelishia Pillay and Amélia Loja

Hybridizing Evolutionary Algorithms for Creating Classifier Ensembles
Emmanuel Dufourq and Nelishia Pillay

Hybrid Genetic-Fuzzy Systems for Improved Performance in Residual-Based Fault Detection
Francisco Serdio, Ciprian Zavoianu, Edwin Lughhofer, Kurt Pichler, Thomas Buchegger and Hajrudin Efendic

Feature Selection and Ensemble of Regression models for Predicting the Protein Macromolecule Dissolution Profile
Varun Ojha, Konrad Jackowski, Ajith Abraham and Vaclav Snasel

Optimization of Interval Type-2 Fuzzy Logic Systems using Tabu Search Algorithms
Majid Almarashi and Abdel-Rahman Hedar
16:00 - 16:20: Coffee Break

16:20 - 17:30: NaBIC Session VIII - Hybrid Systems (Room H202)
Chair: Joaquim Infante Barbosa and Yuko Osana

*Fall Avoidance of Bipedal Walking Robot by Profit Sharing that can Learn Deterministic Policy for POMDPs Environments*
Toshihiro Suzuki and Yuko Osana

*Automatic Melody Generation considering Chord Progression by Genetic Algorithm*
Motoki Kikuchi and Yuko Osana

*Logarithmically Proportional Objective Function for Planar Surfaces Recognition in 3D Point Cloud*
Mosab Bazargani, Luís Mateus and Maria Amélia R. Loja

16:20 - 17:30: NaBIC Session IX - Intelligent Applications (Room H207)
Chair: Paulo Goncalves and Judite Ferreira

*Optimization of structures modeled with a meshfree approach*
Gonçalo Bernardo and M. Amélia Loja

*Reg4OptFlux: an OptFlux plug-in that comprises meta-heuristics approaches for Metabolic Engineering using Integrated Models*
Orlando Rocha, Paulo Vilaça, Miguel Rocha and Rui Mendes

*Effect of Communication Topologies on Hybrid Evolutionary Algorithms*
Wayne Franz and Parimala Thulasiram

*Towards a low-cost framework for Intelligent Robots*
Paulo Goncalves, Fábio Santos and Pedro Torres

*Deleting or Keeping Outliers for Classifier Training?*
Antonio J. Tallón-Ballesteros and José C. Riquelme

18:30 - 21:00: Conference Banquet
- Poster Presentation During Coffee Breaks -

** NaBIC 2014 Posters **

*Optimal Operation Point in Electrical Grids Using a MOPSO Algorithm*
Paulo Pereira, Sérgio Leitão and Eduardo Solteiro Pires

*Magnetotactic Bacteria Optimization Algorithm Based On Best-Rand Scheme*
Hongwei Mo and Mengjiao Geng

*Discount Heuristics and Heterogeneous Probabilities for Optimal Influence in Social Networks*
Kalyanasundaram Sivasailam, Vinu Sebastian, Dhanya Jacob and Swapan Bhattacharaya

*Fuzzy C-Means with Wavelet Filtration for MR Image Segmentation*
Shang-Ling Jui, Chao Lin, Haibing Guan, Ajith Abraham, Aboul Ella Hassanien and Kai Xiao

*Extracting Three-Dimensional Cellular Automaton for Cement Microstructure Development using Gene Expression Programming*
Zhifeng Liang, Bo Yang, Lin Wang, Xiaoqiang Zhang, Nana He and Ajith Abraham

*Improvement of FCM Neural Network Classifier using K-Medoids Clustering*
Xiaoqian Zhang, Bo Yang, Lin Wang, Zhifeng Liang and Ajith Abraham

*Rapid Way Mobile Application in Wireless Sensor Network: A Practical Research in Transportation System*
Iman Valizadeh, Mohammad Shojaifar and Ajith Abraham

*Feedforward and Feedback Optimal Vibration Rejection for Active Suspension Discrete-Time Systems under In-Vehicle Networks*
Shi-Yuan Han, Dong Wang, Yue-Hui Chen, Kun Ma, Ajith Abraham and Zhong-Guang Liu

*Genetic Algorithm for Solving Survivable Network Design Problem with Extending-Cycle-Based Protected Working Capacity Envelope*
Le Khac Tuan and Huynh Thi Thanh Binh

** CASoN Posters **

*Maximization of entropy in a asymmetry-coupled network*
Xiaoling Nian and Hongguang Fu

*Internet of Things Communication Reference Model*
Adel Al-hamedi

*Hybrid Parallel Approach for Personalized Literature Recommendation System*
Kun Ma, Ting ting Lu and Ajith Abraham

*A New Protein Structure Classification Model*
Dong Wang, Shiyuan Han, Yuehui Chen, Wenzheng Bao, Xumi Qu, Kun Ma and Ajith Abraham

*Modeling Dynamics of Social Networks: A Survey*
Saoussen Aouay, Salma Jamoussi, Faiez Gargouri and Ajith Abraham