

Provisional Programme for IDEAL2010-06-30

Tuesday 31<sup>st</sup> August 18:00 -20:00

Welcome reception in Paisley Museum

Wednesday 1<sup>st</sup> September

9:00-9:15 Welcome addresses

9:30-10:30 Plenary

10:30 Tea/Coffee

11:00 -1:00 Genetic Algorithms and reinforcement learning

11:00-1:00 Biological information processing

1:00 – 2:30 Lunch

2:30 – 3:30 Plenary

3:30 Tea/Coffee

4:00 -6:00 Clustering and Classification

4:00-6:00 Artificial neural networks

Thursday 2<sup>nd</sup> September

9:00-10:00 Plenary

10:00 Tea/Coffee

10:30 – 12:30 Time series and Fourier-related papers

10:30-12:30 Performance issues

12:30- 2:00 Lunch

2:00-3:00 Plenary

3:00 Tea/Coffee

3:30 – 5:30 Probabilistic models and text mining

3:30 – 5:30 Agent simulations

8:00 Conference dinner at Watermill Hotel

Friday 3<sup>rd</sup> September

9:00-10:00 Plenary

10:00 Tea/Coffee

10:30 -12:30 Kernels and Data Mining

12:30 -1:30 Plenary

1:30 Lunch

## Detailed program

Wednesday 1<sup>st</sup> September

11:00-1:00 Genetic algorithms and Reinforcement Learning

Cost Optimization of a Localized Irrigation System Using Genetic Algorithms

Monica S. Pais, Julio C. Ferreira, Marconi B. Teixeira, Keiji Yamanaka, Gilberto A. Carrijo

An evolutionary multi-objective optimization of market structures using PBIL

Andreas Krause, Xinyang Li

Surrogate model for Continuous and Discrete Genetic Optimization Based on RBF Networks

Lukáš Bajer, Martin Holeňa

A Hybrid Evolutionary Algorithm to Quadratic Three-Dimensional Assignment Problem with Local Search for Many-Core Graphics Processors

Piotr Lipinski

Evolution Strategies for Objective Functions with Locally Correlated Variables

Piotr Lipinski

The Penalty Avoiding Rational Policy Making algorithm in Continuous Action Spaces

Kazuteru Miyazaki

11:00-1:00 Biological information processing

Gallbladder Boundary Segmentation from Ultrasound Images Using Active Contour Model

Marcin Ciecholewski

Annotation and Retrieval of Cell Images

Maria F. O'Connor, Arthur Hughes, Chaoxin Zheng, Anthony Davies, Dermot Kelleher, Khurshid Ahmad

Neural Data Analysis and Reduction Using Improved Framework of Information-Preserving EMD

Zareen Mehboob, Hujun Yin

4:00 -6:00 Clustering and Classification

Applying Clustering Techniques to Reduce Complexity in Automated Planning Domains

Luke Dicken, John Levine

Relevance of contextual information in compression-based text clustering

Ana Granados, Rafael Martínez, David Camacho, Francisco de Borja Rodriguez

A Neighborhood-Based Clustering by Means of the Triangle Inequality

Marzena Kryszkiewicz, Piotr Lasek

An Efficient Approach to Clustering Real-Estate Listings

Maciej Grzenda, Deepak Thukral

Classification by Multiple Reducts-kNN with Confidence

Naohiro Ishii, Yuichi Morioka, Hiroaki Kimura, Yongguang Bao

A Randomized Sphere Cover Classifier

Reda Younsi, Tony Bagnall

#### 4:00-6:00 Artificial neural networks

Dimension Reduction for Regression with Bottleneck Neural Networks  
Elina Parviainen

Investigating the behaviour of Radial Basis Function Networks in Regression and Classification of Geospatial Data  
Andrea Guidali, Elisabetta Binaghi, Mauro Guglielmin, Marco Pascale

Simple Deterministically Constructed Recurrent Neural Networks  
Ali Rodan, Peter Tino

Clustering and visualizing SOM results  
Jose Alfredo Costa

Improving the Performance of the Truncated Fourier System Least Squares Power System Load Model using an Artificial Neural Network Paradigm  
Gary Leppy, Ali Osareh, Shonique Miller, Hari Thakur

#### Thursday 2<sup>nd</sup> September

##### 10:30 – 12:30 Time series and Fourier-related papers

Histogram Distance for Similarity Search in Large Time Series Database  
Yicun Ouyang, Feng Zhang

Analysing Satellite Image Time Series by means of Pattern Mining  
Francois Petitjean, Pierre Gancarski, Florent Maseglia, Germain

Trajectory based Behavior Analysis for User Verification  
Hsing-Kuo Pao, Hong-Yi Lin, Kuan-Ta Chen, Junaidillah Fadlil

A privacy preserving technique for Euclidean distance based mining algorithms using a Wavelet-related transform  
Mohammadali Kadampur, Somayajulu D V L N

Extracting features from an electrical signal of a non-intrusive load monitoring system  
Marisa B. Figueiredo, Ana de Almeida, Bernardete Ribeiro, António Martins

Directed figure codes with weak equality  
Włodzimierz Moczurad

##### 10:30-12:30 Performance issues

Incremental update of cyclic association rules  
Eya BEN AHMED

Non-Negative Matrix Factorization Implementation Using Graphic Processing Units  
Noel Lopes, Bernardete Ribeiro

Large scale instance selection by means of a parallel algorithm  
Nicolás García-Pedrajas, Aida Dea Haro-García, Juan Antonio Romero del Castillo

Simplified Self-Adapting Skip Lists  
Jonathan Pittard, Alan Tharp

Interval Filter: a locality-aware alternative to Bloom filters for hardware membership queries  
by interval classification  
Ricardo Quisiant, Eladio Gutierrez, Oscar Plata, Emilio Zapata

3:30 – 5:30 Probabilistic models and text mining

Typed Linear Chain Conditional Random Fields And Their Application To Intrusion Detection  
Carsten Eilers, Mirko Horstmann, Karsten Sohr, Otthein Herzog

A Generalization of Independence in Naive Bayes Model  
Yu Fujimoto, Noboru Murata

Approximating the Covariance Matrix of GMMs with Low-rank Perturbations  
Jonathan Purnell, Malik Magdon-Ismail

Learning Negotiation Policies Using IB3 and Bayesian Networks  
Gislaine Maria Nalepa, Edson Scalabrin, Bráulio C. Ávila, Fabrício Enembreck

Sentence Generation by Frequent Parsing Patterns  
Takashi Yanagisawa, Takao Miura, Isamu Shioya

Discovering Concept Mappings by Similarity Propagation among Substructures  
Qi Hua Pan, Fedja Hadzic, Tharam Dillon

3:30 – 5:30 Agent simulations

Multi-Agent Architecture with support to quality of Service and Quality of Control  
Jose-luis Poza-Luján, Juan-Luis Posadas-Yagüe , Jose Simó-Ten

Adaptive Particle Swarm Optimizer for Feature selection  
Amir Esseghir

Selection of structures with grid optimization, in multiagent data warehouse  
Marcin Gorawski, Sławomir Bańkowski , Michal Gorawski

Friday 3<sup>rd</sup> September

10:30 -12:30 Kernels and Data Mining

Generalized derivative based kernelized Learning Vector Quantization  
Frank-Michael Schleif, Thomas Villmann , Barbara Hammer

On the Power of Topological Kernel in Microarray-Based Detection of Cancer  
Vilen Jumutc, Pawel Zayakin

Robust 1-Norm Soft Margin Smooth Support Vector Machine  
Li-Jen Chien, Yuh-Jye Lee , Zhi-Peng Kao , Chih-Cheng Chang

Towards Automatic Classification of Wikipedia Content  
Julian Szymanski

New Application of Graph Mining to Video Analysis  
Hisashi Koga, Tomokazu Tsuji, Takanori Yokoyama , Toshinori

The M-OLAP Cube Selection Problem: A Hyper-Polymorphic Algorithm Approach  
Orlando Belo, Jorge Loureiro