



UNITED KINGDOM WORKSHOP ON COMPUTATIONAL INTELLIGENCE UKCI05

5-7 September 2005

School of Computer Science and Information Systems (SCSIS)
Birkbeck University of London

Venue: *London Knowledge Lab, 23-29 Emerald Street, London WC1N 3QS*



PROGRAMME

5 September Monday

10:00 Registration

11:00 Coffee

11:30-12:00 Opening remarks

Prof. Alex Poulovassilis (Head SCSIS Birkbeck)

Prof. Boris Mirkin (Chair UKCI05)

12:00-1:00 Plenary talk

Qiang Shen (U Aberystwyth)

Combining Rough and Fuzzy Sets for Feature Selection

1:00-2:00 Lunch

2:00-3:40 Session: **Intelligent Techniques and Applications I**

Michelle Galea (U Edinburgh), Qiang Shen (U Aberystwyth) and Vishal Singh (Larson India)

[Encouraging Complementary Fuzzy Rules within Iterative Rule Learning](#)

Parkpoom Lekhavat and Chris Hinde (U Loughborough)

[Fuzzy reasoning in Computer Go opening stage strategy](#)

Peter C R Lane (U Hertfordshire) and Fernand Gobet (Brunel)

[Apply multi-criteria optimisation to develop cognitive models](#)

Allan Bruce and George Coghill (U Aberdeen)

Implementing Parallelisations in a Fuzzy Qualitative Reasoning Engine

Osama Zaki, Keith Brown and Dave Lane (Heriot-Watt U Edinburgh)

[Automatic Generation of Software Agents for Physical Model from a Description](#)

3:40-4:10 Coffee break

4:10-5:50 Session: **Learning Classifiers**

Chris Hinde and Yen Cheung (U Loughborough)
[Data Mining in Continuous Data Sets](#)

John Q. Gan (U Essex Colchester)
[On Optimal Criteria of Data-Driven Design of Linear Projections for Classification](#)

Rónán Daly (U Edinburgh) and Qiang Shen (U Aberystwyth)
[A Framework for the Scoring of Operators on the Search Space of Equivalence Classes of Bayesian Network Structures](#)

Shang-Ming Zhou and John Gan (U Essex Colchester)
[L2-SVM Based Fuzzy Classifier with Automatic Model Selection and Fuzzy Rule Ranking](#)

Dell Zhang (Birkbeck London) and Wee Sun Lee (U Singapore)
[A Simple Probabilistic Approach to Learning from Positive and Unlabeled Examples](#)

6 September Tuesday

8:50-9:50 Plenary talk

Jean Diatta (U Reunion, France)
[Formal Concepts and Galois Weak Hierarchies: Theoretical and Computational Issues](#)

9:50-10:10 Coffee break

10:10-11:50 Session: **Fuzzy Constructs**

Richard Jensen and Qiang Shen (U Aberystwyth)
[Fuzzy-Rough Feature Significance for Fuzzy Decision Trees](#)

George M. Coghill, Allan Bruce, Carol Wisley and Honghai Liu (U Aberdeen)
[Integrating Fuzzy Qualitative Trigonometry with Fuzzy Qualitative Envisionment](#)

Zhiheng Huang (U Edinburgh) and Qiang Shen (U Aberystwyth)
[Preserving Piece-wise Linearity in Fuzzy Interpolation](#)

Chris Hinde, Robert Patching (U Loughborough) and Steve McCoy (Hazard Techn-Nottingham)
[Semantic Unification of Continuous Sets](#)

Sarah Greenfield (Greenfield Enterprises Ltd Leicester), Robert John and Simon Coupland (U De Montfort Leicester)
[A Novel Sampling Method for Type-2 Defuzzification](#)

11:50-12:10 Coffee break

12:10-1:50 Session: **Analysing Spatial Data**

Samarasena Buchala, Neil Davey, Tim Gale and Ray Frank (U Hertfordshire Hatfield)
[Principal Component Analysis of Face Properties](#)

[Lin Zhang and Nigel Allinson \(U Sheffield\)](#)

Automatic Shoeprint Retrieval System for Use in Forensic Science

Susana Nascimento, Fátima Sousa, Hugo Casimiro and Dmitri Boutov (U Nova, Lisbon, Portugal)

[Applicability of Fuzzy Clustering for the Identification of Upwelling Areas on Sea Surface Temperature Images](#)

Jonathan Rossiter (U Bristol) and Toshiharu Mukai (IPCR Japan)

[Guided Learning from Images Using an Uncertain Granular Model and Biomimicry of the Human Fovea](#)

Xiaowei Zhou, Plamen Angelov and Gruff Morris (Lancaster University)

Novelty Detection and Landmark Recognition by Real-time Evolving Clustering

1:50-2:30 Lunch

2:30-4:10 Session: **Intelligent Techniques and Applications II**

Basim Majeed, Ben Azvine, Steve Brown (ISR/PICTR BT Adastral Park) and Trevor Martin (U Bristol)

[Intelligent Systems for Telecare](#)

Xue Zhong Wang, F.W. Buontempo, M. Mwense (U Leeds), Anita Young (AstraZeneca Brixham) and Daniel Osborn (CEH Huntingdon)

[Induction of Decision Trees Using Genetic Programming for the Development of SAR Toxicity Model](#)

Robert Stanforth, Evgueni Kolossov (IDBS Guilford) and Boris Mirkin (Birkbeck London)

[A Cluster-Based Measure of Domain of Applicability of a QSAR Model](#)

Neil Davey and Yi Sun (U Hertfordshire Hatfield)

[Using Real-Valued Meta Classifiers to Integrate Binding Sites](#)

Kevin Doherty, Rod Adams and Neil Davey (U Hertfordshire Hatfield)

Hierarchical Topological Clustering Learns Stock Market Sectors

4:10-4:30 Coffee break

4:30-6:10 Session: **Classification and Clustering (Jointly with the British Classification Society)**

Eduarda Mendes Rodrigues and Lionel Sacks (UCL London)

[Learning Topic Hierarchies from Text Documents using a Scalable Hierarchical Fuzzy Clustering Method](#)

Behrad Assadian, Ben Azvine (BT) and Trevor Martin (U Bristol)

[Asymmetric Word Similarity](#)

Rajesh Pampapathi, Boris Mirkin and Mark Levene (Birkbeck London)

[A Suffix Tree Approach to Text Categorisation Applied to Spam Filtering](#)

Gentian Gushe (ENST-Bretagne, France)

[Properties of Minimum Rigidity Graphs Associated with a Clustering System](#)

Fionn Murtagh (Royal Holloway London)

Clustering in Very High Dimensions

7:30-10:00 Workshop Dinner, Chez Gerrard, Covent Garden

7 September Wednesday

8:50-9:50 Plenary talk

Riccardo Poli (U Essex Colchester)
Surfing the Waves of Artificial Intelligence

9:50-11:30 Session: **Evolutionary Computations**

Dimitris Tasoulis, Vassilis Plagianakos and Michael Vrahatis (U Patras Greece)

Efficient Evolutionary Unsupervised Clustering

Chris Hinde and James Hillman (U Loughborough)

[Evolving UAV Tactics with an Infected Genome](#)

George Magoulas and Aristoklis Anastasiadis (Birkbeck London)
Computational Techniques with Adaptation Schedules Based on the Nonextensive q-Distribution

Meng Yang and A.E.A. Almaini (U Napier Edinburgh)

[An Investigation on FPGA Placement Using Mixed Genetic Algorithm with Simulated Annealing](#)

Hao Wu, Jun He and Xin Yao (U Birmingham)

A Web Service Demo of Evolutionary Programming Using a Mixed Mutation Strategy for Function Optimization

11:30-11:50 Coffee break

11:50-1:30 Session: **Intelligent Techniques and Applications III**

John Woodward (U Birmingham)

Complexity and Cartesian Genetic Programming

John Woodward (U Birmingham)

Invariants of Function Complexity under Primitive Recursive Functions

Chris Hinde and Jeremy Rimmer (U Loughborough)

[Acceptance of Context Sensitive Languages Using Ribonucleic Acid Computation](#)

Ito Wasito, Mutia N. Estri and Suriza Akhmad Zabidi (U Kuala Lumpur Malaysia)

Selection of Number of Factors and Neighbours of INI for Microarray Gene Expression

Hishammuddin Asmuni, Edmund Burke and Jonathan Garibaldi (U Nottingham)

[Fuzzy Multiple Heuristic Orderings for Course Timetabling Problem](#)

1:30-2:30 Lunch

2:30-4:00 Plenary meeting

Discussion: Computational Intelligence as a Discipline

Closing the Workshop