

EvoBIO2006 PROGRAMME

4th European Workshop on Evolutionary Bioinformatics

Monday 10 April Bruxelles Room

- 0930-1100 **Plenary session:** invited speaker Dr Rich Terrile
- 1100-1120 **Coffee break**
- 1120-1250 **Data Mining and Knowledge Discovery:** CHAIR: David W. Corne
Incorporating biological domain knowledge into cluster validity assessment
Nadia Bolshakova, Francisco Azuaje, Padraig Cunningham (Nominated for Best Paper Award)
Mining structural databases: an evolutionary conceptual clustering approach
Rocio Romero Zaliz, Oscar Cordón, Oscar Harari, Coral del Val, Igor Zwir
Multi-Stage Evolutionary Algorithms for Efficient Identification of Gene Regulatory Networks
Kee-Young Kim, Dong-Yeon Cho, Byoung-Tak Zhang
- 1250-1415 **Lunch**
- 1415-1545 **Machine Learning Approaches:** CHAIR: Elena Marchiori
Human Papillomavirus Risk Type Classification from Protein Sequences Using Support Vector Machines
Sun Kim, Byoung-Tak Zhang
From HP Lattice Models to Real Proteins: coordination number prediction using Learning Classifier Systems
Michael Stout, Jaume Bacardit, Jonathan D. Hirst and Natalio Krasnogor
Comparison of Neural Network Optimization Approaches for Studies of Human Genetics
Alison Motsinger, Scott Dudek, Lance Hahn, Marylyn Ritchie
- 1545-1600 **Coffee break**
- 1600-1730 **Sequence Analysis:** CHAIR: Carlos Cotta
Multiple sequence alignment based on set covers
Alexandre Henrique Lopes Porto, Valmir Carneiro Barbosa
DNA Fragment Assembly: An Ant Colony System Approach
Wannasak Wetcharaporn, Nachol Chaiyaratana, Sissades Tongsima
An Algorithm for the Automated Verification of DNA Supercontig Assemblies
Nikola Stojanovic
- 1730-1900 **Conference poster session**
- 1930-2230 **Conference Reception in conjunction with EvoMusArt exhibition at Artpool Art Research Centre (coaches depart at 1930)**

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Tuesday 11 April Bruxelles Room

- 0930-1100 **Clustering and Combinatorial Bioinformatics:** CHAIR: Nikola Stojanovic
Obtaining Biclusters in Microarrays with Population-based Heuristics
Pablo Palacios, David Pelta, Armando Blanco
Hierarchical Clustering, Languages and Cancer
Pritha Mahata, Wagner Costa, Carlos Cotta, Pablo Moscato
A methodology for determining amino-acid substitution matrices from set covers
Alexandre Henrique Lopes Porto, Valmir Carneiro Barbosa
- 1100-1120 **Coffee break**
- 1120-1250 **Microarray Methods:** CHAIR: Nadia Bolshakova
Microarray Probe Design using ϵ -Multi-Objective Evolutionary Algorithms with Thermodynamic Criteria
Soo-Yong Shin, In-Hee Lee, Byoung-Tak Zhang (Nominated for Best Paper Award)
Optimal Selection of Microarray Analysis Methods using a Conceptual Clustering Algorithm
Cristina Rubio-Escudero, Oscar Cordon, Oscar Harari, Coral del Val, Igor Zwir
A novel Mathematical Model for the Optimization of DNA-Chip Design and its Implementation
Kornélia Danyi, Gabriella Kókai, József Csontos
- 1250-1415 **Lunch**
- 1415-1545 **Feature Selection:** CHAIR: Alison Motsinger
On the Use of Variable Complementarity for Feature Selection in Cancer Classification
Patrick Emmanuel Meyer, Gianluca Bontempi
A Hybrid GA/SVM Approach for Gene Selection and Classification of Microarray Data
Edmundo Bonilla Huerta, Béatrice Duval, Jin-Kao Hao
Robust feature selection for potential biomarker detection with noisy pattern proteomic data
Elena Marchiori, Niels H.H. Heegaard, Mikkel West-Nielsen, Connie R. Jimenez
(Nominated for Best Paper Award)
- 1545-1600 **Coffee break**
- 1600-1730 **EvoBIO Round Table:** CHAIR: Jason H. Moore
- 1900 - 2230 **Danube River cruise and Conference Dinner (coaches depart at 1900)**

Wednesday 12 April Bruxelles Room

- 0930-1100 **Proteins:** CHAIR: Byoung-Tak Zhang
Conditional Random Fields for Predicting and Analyzing Histone Occupancy, Acetylation and Methylation Areas in DNA Sequences
Dang Hung Tran, Tho Hoan Pham, Kenji Satou, Tu Bao Ho
Multi-Objective Evolutionary Algorithm for Discovering Peptide Binding Motifs
Menaka Rajapakse, Bertil Schmidt, Vladimir Brusic
Functional Classification of G-Protein Coupled Receptors Based on Their Specific Ligand Coupling Pattern:
Burcu Bakir, Osman Ugur Sezerman (Nominated for Best Paper Award)
- 1100-1115 **Coffee break**
- 1115-1230 **Plenary session:** invited speaker Prof Stefan Voss
- 1230-1245 **Conference closing, presentation of best paper awards**

