

Zheng Rong Yang
Richard Everson
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Preface

The Intelligent Data Engineering and Automated Learning (IDEAL) conference series began in 1998 in Hong Kong, when the world started to experience information and data explosion and to demand for better, intelligent methodologies and techniques. It has since developed, enjoyed success in recent years, and become a unique annual international forum dedicated to emerging topics and technologies in intelligent data analysis and mining, knowledge discovery, automated learning and agent technology, as well as interdisciplinary applications, especially bioinformatics. These techniques are common and applicable to many fields. The multidisciplinary nature of research nowadays is pushing the boundaries and one of the principal aims of the IDEAL conference is to promote interactions and collaborations between disciplines, which are beneficial and bringing fruitful solutions.

This volume of Lecture Notes in Computer Science contains accepted papers presented at IDEAL 2004, held in Exeter, UK, August 25–27, 2004. The conference received 272 submissions from all over the world, which were subsequently refereed by the Program Committee. Among them 124 high-quality papers were accepted and included in the proceedings. IDEAL 2004 enjoyed outstanding keynote talks by distinguished guest speakers, *Jim Austin, Mark Girolami, Ross King, Lei Xu* and *Robert Esnouf*.

This year IDEAL also teamed up with three international journals, namely the *International Journal of Neural Systems*, the *Journal of Mathematical Modelling and Algorithms*, and *Neural Computing & Applications*. Three special issues on *Bioinformatics*, *Learning Algorithms*, and *Neural Networks & Data Mining*, respectively, have been scheduled for selected papers from IDEAL 2004. The extended papers, together with contributed articles received in response to subsequent open calls, will go through further rounds of peer refereeing in the remits of these three journals.

We would like to thank the International Advisory Committee and the Steering Committee for their guidance and advice. We also greatly appreciate the Program Committee members for their rigorous and efficient reviewing of the submitted papers, and the Organizing Committee for their enormous effort and excellent work. In addition, we are especially grateful to the Exeter University Computer Science Department, the IEEE Neural Networks Society, and Springer-Verlag for their support and continued collaborations. We look forward to further, closer collaboration with the IEEE in the future.

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Table of Contents

Bioinformatics

Modelling and Clustering of Gene Expressions Using RBFs and a Shape Similarity Metric	1
<i>Carla S. Möller-Levet and Hujun Yin</i>	
A Novel Hybrid GA/SVM System for Protein Sequences Classification . . .	11
<i>Xing-Ming Zhao, De-Shuang Huang, Yiu-ming Cheung, Hong-qiang Wang, and Xin Huang</i>	
Building Genetic Networks for Gene Expression Patterns	17
<i>Wai-Ki Ching, Eric S. Fung, and Michael K. Ng</i>	
SVM-Based Classification of Distant Proteins Using Hierarchical Motifs . .	25
<i>Jérôme Mikolajczack, Gérard Ramstein, and Yannick Jacques</i>	
Knowledge Discovery in Lymphoma Cancer from Gene-Expression	31
<i>Jesús S. Aguilar-Ruiz and Francisco Azuaje</i>	
A Method of Filtering Protein Surface Motifs Based on Similarity Among Local Surfaces	39
<i>Nripendra Lal Shrestha, Youhei Kawaguchi, Tadasuke Nakagawa, and Takenao Ohkawa</i>	
Qualified Predictions for Proteomics Pattern Diagnostics with Confidence Machines	46
<i>Zhiyuan Luo, Tony Bellotti, and Alex Gammerman</i>	
An Assessment of Feature Relevance in Predicting Protein Function from Sequence	52
<i>Ali Al-Shahib, Chao He, Aik Choon Tan, Mark Girolami, and David Gilbert</i>	
A New Artificial Immune System Algorithm for Clustering	58
<i>Reda Younsi and Wenjia Wang</i>	
The Categorisation of Similar Non-rigid Biological Objects by Clustering Local Appearance Patches	65
<i>Hongbin Wang and Phil F. Culverhouse</i>	
Unsupervised Dense Regions Discovery in DNA Microarray Data	71
<i>Andy M. Yip, Edmond H. Wu, Michael K. Ng, and Tony F. Chan</i>	

Visualisation of Distributions and Clusters Using ViSOMs on Gene Expression Data	78
<i>Swapna Sarvesvaran and Hujun Yin</i>	
Prediction of Implicit Protein-Protein Interaction by Optimal Associative Feature Mining	85
<i>Jae-Hong Eom, Jeong-Ho Chang, and Byoung-Tak Zhang</i>	
Exploring Dependencies Between Yeast Stress Genes and Their Regulators	92
<i>Janne Nikkilä, Christophe Roos, and Samuel Kaski</i>	
Poly-transformation	99
<i>Ross D. King and Mohammed Ouali</i>	
Prediction of Natively Disordered Regions in Proteins Using a Bio-basis Function Neural Network	108
<i>Rebecca Thomson and Robert Esnouf</i>	
The Effect of Image Compression on Classification and Storage Requirements in a High-Throughput Crystallization System .	117
<i>Ian Berry, Julie Wilson, Chris Mayo, Jon Diprose, and Robert Esnouf</i>	
PromSearch: A Hybrid Approach to Human Core-Promoter Prediction ..	125
<i>Byoung-Hee Kim, Seong-Bae Park, and Byoung-Tak Zhang</i>	
Data Mining and Knowledge Engineering	
Synergy of Logistic Regression and Support Vector Machine in Multiple-Class Classification	132
<i>Yuan-chin Ivar Chang and Sung-Chiang Lin</i>	
Deterministic Propagation of Blood Pressure Waveform from Human Wrists to Fingertips	142
<i>Yi Zhao and Michael Small</i>	
Pre-pruning Decision Trees by Local Association Rules	148
<i>Tomoya Takamitsu, Takao Miura, and Isamu Shioya</i>	
A New Approach for Selecting Attributes Based on Rough Set Theory ...	152
<i>Jiang Yun, Li Zhanhuai, Zhang Yang, and Zhang Qiang</i>	
A Framework for Mining Association Rules in Data Warehouses	159
<i>Haorianto Cokrowijoyo Tjioe and David Taniar</i>	
Intelligent Web Service Discovery in Large Distributed System	166
<i>Shoujian Yu, Jianwei Liu, and Jiajin Le</i>	
The Application of K-Medoids and PAM to the Clustering of Rules	173
<i>Alan P. Reynolds, Graeme Richards, and Vic J. Rayward-Smith</i>	

A Comparison of Texture Features for the Classification of Rock Images	179
<i>Maneesha Singh, Akbar Javadi, and Sameer Singh</i>	
A Mixture of Experts Image Enhancement Scheme for CCTV Images	185
<i>Maneesha Singh, Sameer Singh, and Matthew Porter</i>	
Integration of Projected Clusters and Principal Axis Trees for High-Dimensional Data Indexing and Query	191
<i>Ben Wang and John Q. Gan</i>	
Unsupervised Segmentation on Image with JSEG Using Soft Class Map ..	197
<i>Yuanjie Zheng, Jie Yang, and Yue Zhou</i>	
DESCRY: A Density Based Clustering Algorithm for Very Large Data Sets	203
<i>Fabrizio Angiulli, Clara Pizzuti, and Massimo Ruffolo</i>	
A Fuzzy Set Based Trust and Reputation Model in P2P Networks	211
<i>Zhang Shuqin, Lu Dongxin, and Yang Yongtian</i>	
Video Based Human Behavior Identification Using Frequency Domain Analysis	218
<i>Jessica JunLin Wang and Sameer Singh</i>	
Mobile Data Mining by Location Dependencies	225
<i>Jen Ye Goh and David Taniar</i>	
An Algorithm for Artificial Intelligence-Based Model Adaptation to Dynamic Data Distribution	232
<i>Vincent C.S. Lee and Alex T.H. Sim</i>	
On a Detection of Korean Prosody Phrases Boundaries	241
<i>Jong Kuk Kim, Ki Young Lee, and Myung Jin Bae</i>	
A Collision Avoidance System for Autonomous Ship Using Fuzzy Relational Products and COLREGs	247
<i>Young-il Lee and Yong-Gi Kim</i>	
Engineering Knowledge Discovery in Network Intrusion Detection	253
<i>Andrea Bosin, Nicoletta Dessì, and Barbara Pes</i>	
False Alarm Classification Model for Network-Based Intrusion Detection System	259
<i>Moon Sun Shin, Eun Hee Kim, and Keun Ho Ryu</i>	
Exploiting Safety Constraints in Fuzzy Self-organising Maps for Safety Critical Applications	266
<i>Zeshan Kurd, Tim P. Kelly, and Jim Austin</i>	

Surface Spatial Index Structure of High-Dimensional Space	272
<i>Jiyuan An, Yi-Ping Phoebe Chen, and Qinying Xu</i>	
Generating and Applying Rules for Interval Valued Fuzzy Observations . .	279
<i>Andre de Korvin, Chenyi Hu, and Ping Chen</i>	
Automatic Video Shot Boundary Detection Using Machine Learning	285
<i>Wei Ren and Sameer Singh</i>	
On Building XML Data Warehouses	293
<i>Laura Irina Rusu, Wenny Rahayu, and David Taniar</i>	
A Novel Method for Mining Frequent Subtrees from XML Data	300
<i>Wan-Song Zhang, Da-Xin Liu, and Jian-Pei Zhang</i>	
Mining Association Rules Using Relative Confidence	306
<i>Tien Dung Do, Siu Cheung Hui, and Alvis C.M. Fong</i>	
Multiple Classifiers Fusion System Based on the Radial Basis Probabilistic Neural Networks	314
<i>Wen-Bo Zhao, Ming-Yi Zhang, Li-Ming Wang, Ji-Yan Du, and De-Shuang Huang</i>	
An Effective Distributed Privacy-Preserving Data Mining Algorithm . . .	320
<i>Takuya Fukasawa, Jiahong Wang, Toyoo Takata, and Masatoshi Miyazaki</i>	
Dimensionality Reduction with Image Data	326
<i>Mónica Benito and Daniel Peña</i>	
Implicit Fitness Sharing Speciation and Emergent Diversity in Tree Classifier Ensembles	333
<i>Karl J. Brazier, Graeme Richards, and Wenjia Wang</i>	
Improving Decision Tree Performance Through Induction- and Cluster-Based Stratified Sampling	339
<i>Abdul A. Gill, George D. Smith, and Anthony J. Bagnall</i>	
Learning to Classify Biomedical Terms Through Literature Mining and Genetic Algorithms	345
<i>Irena Spasić, Goran Nenadić, and Sophia Ananiadou</i>	
PRICES: An Efficient Algorithm for Mining Association Rules	352
<i>Chuan Wang and Christos Tjortjis</i>	
Combination of SVM Knowledge for Microcalcification Detection in Digital Mammograms	359
<i>Ying Li and Jianmin Jiang</i>	

<i>Char: An Automatic Way to Describe Characteristics of Data</i>	366
<i>Yu-Chin Liu and Ping-Yu Hsu</i>	
Two Methods for Automatic 3D Reconstruction from Long Un-calibrated Sequences	377
<i>Yoon-Yong Jeong, Bo-Ra Seok, Yong-Ho Hwang, and Hyun-Ki Hong</i>	
Wrapper for Ranking Feature Selection	384
<i>Roberto Ruiz, Jesús S. Aguilar-Ruiz, and José C. Riquelme</i>	
Simultaneous Feature Selection and Weighting for Nearest Neighbor Using Tabu Search	390
<i>Muhammad Atif Tahir, Ahmed Bouridane, and Fatih Kurugollu</i>	
Fast Filtering of Structural Similarity Search Using Discovery of Topological Patterns	396
<i>Sung-Hee Park and Keun Ho Ryu</i>	
Detecting Worm Propagation Using Traffic Concentration Analysis and Inductive Learning	402
<i>Sanguk Noh, Cheolho Lee, Keywon Ryu, Kyunghee Choi, and Gihyun Jung</i>	
Comparing Study for Detecting Microcalcifications in Digital Mammogram Using Wavelets	409
<i>Ju Cheng Yang, Jin Wook Shin, and Dong Sun Park</i>	
A Hybrid Multi-layered Speaker Independent Arabic Phoneme Identification System	416
<i>Mian M. Awais, Shahid Masud, Shafay Shamail, and J. Akhtar</i>	
Feature Selection for Natural Disaster Texts Classification Using Testors	424
<i>Jesús A. Carrasco-Ochoa and José Fco. Martínez-Trinidad</i>	
Mining Large Engineering Data Sets on the Grid Using AURA	430
<i>Bojian Liang and Jim Austin</i>	
Self-tuning Based Fuzzy PID Controllers: Application to Control of Nonlinear HVAC Systems	437
<i>Behzad Moshiri and Farzan Rashidi</i>	
Ontology-Based Web Navigation Assistant	443
<i>Hyunsub Jung, Jaeyoung Yang, and Joongmin Choi</i>	
A Hybrid Fuzzy-Neuro Model for Preference-Based Decision Analysis	449
<i>Vincent C.S. Lee and Alex T.H. Sim</i>	

Combining Rules for Text Categorization Using Dempster's Rule of Combination	457
<i>Yaxin Bi, Terry Anderson, and Sally McClean</i>	
Genetic Program Based Data Mining for Fuzzy Decision Trees	464
<i>James F. Smith III</i>	
Automating Co-evolutionary Data Mining	471
<i>James F. Smith III</i>	
Topological Tree for Web Organisation, Discovery and Exploration	478
<i>Richard T. Freeman and Hujun Yin</i>	
New Medical Diagnostic Method for Oriental Medicine Using BYY Harmony Learning	485
<i>JeongYon Shim</i>	
An Intelligent Topic-Specific Crawler Using Degree of Relevance	491
<i>Sanguk Noh, Youngsoo Choi, Haesung Seo, Kyunghae Choi, and Gihyun Jung</i>	
Development of a Global and Integral Model of Business Management Using an Unsupervised Model	499
<i>Emilio Corchado, Colin Fyfe, Lourdes Sáiz, and Ana Lara</i>	
Spam Mail Detection Using Artificial Neural Network and Bayesian Filter	505
<i>Levent Özgür, Tunga Güngör, and Fikret Gürçen</i>	
An Integrated Approach to Automatic Indoor Outdoor Scene Classification in Digital Images	511
<i>Matthew Traherne and Sameer Singh</i>	
Using Fuzzy Sets in Contextual Word Similarity	517
<i>Masrah Azmi-Murad and Trevor P. Martin</i>	
Summarizing Time Series: Learning Patterns in 'Volatile' Series	523
<i>Saif Ahmad, Tugba Taskaya-Temizel, and Khurshid Ahmad</i>	
Cosine Transform Priors for Enhanced Decoding of Compressed Images ..	533
<i>Amos Storkey and Michael Allan</i>	
Partial Discharge Classification Through Wavelet Packets of Their Modulated Ultrasonic Emission	540
<i>Mazen Abdel-Salam, Yassin M.Y. Hasan, Mohammed Sayed, and Salah Abdel-Sattar</i>	

A Hybrid Optimization Method of Multi-objective Genetic Algorithm (MOGA) and K-Nearest Neighbor (KNN) Classifier for Hydrological Model Calibration	546
<i>Yang Liu, Soon-Thiam Khu, and Dragon Savic</i>	
Cluster-Based Visualisation of Marketing Data	552
<i>Paulo J.G. Lisboa and Shail Patel</i>	
Dynamic Symbolization of Streaming Time Series	559
<i>Xiaoming Jin, Jianmin Wang, and Jiaguang Sun</i>	
A Clustering Model for Mining Evolving Web User Patterns in Data Stream Environment	565
<i>Edmond H. Wu, Michael K. Ng, Andy M. Yip, and Tony F. Chan</i>	
An Improved Constructive Neural Network Ensemble Approach to Medical Diagnoses	572
<i>Zhenyu Wang, Xin Yao, and Yong Xu</i>	
Spam Classification Using Nearest Neighbour Techniques	578
<i>Dave C. Trudgian</i>	

Learning Algorithms and Systems

Kernel Density Construction Using Orthogonal Forward Regression	586
<i>Sheng Chen, Xia Hong, and Chris J. Harris</i>	
Orthogonal Least Square with Boosting for Regression	593
<i>Sheng Chen, Xunxian Wang, and David J. Brown</i>	
New Applications for Object Recognition and Affine Motion Estimation by Independent Component Analysis	600
<i>Liming Zhang and Xuming Huang</i>	
Personalized News Reading via Hybrid Learning	607
<i>Ke Chen and Sunny Yeung</i>	
Mercer Kernel, Fuzzy C-Means Algorithm, and Prototypes of Clusters ...	613
<i>Shangming Zhou and John Q. Gan</i>	
DIVACE: Diverse and Accurate Ensemble Learning Algorithm	619
<i>Arjun Chandra and Xin Yao</i>	
Parallel Processing for Movement Detection in Neural Networks with Nonlinear Functions	626
<i>Naohiro Ishii, Toshinori Deguchi, and Hiroshi Sasaki</i>	
Combining Multiple k-Nearest Neighbor Classifiers Using Different Distance Functions	634
<i>Yongguang Bao, Naohiro Ishii, and Xiaoyong Du</i>	

Finding Minimal Addition Chains Using Ant Colony	642
<i>Nadia Nedjah and Luiza de Macedo Mourelle</i>	
Combining Local and Global Models to Capture Fast and Slow Dynamics in Time Series Data	648
<i>Michael Small</i>	
A Variable Metric Probabilistic k -Nearest-Neighbours Classifier	654
<i>Richard M. Everson and Jonathan E. Fieldsend</i>	
Feature Word Tracking in Time Series Documents.....	660
<i>Atsuhiko Takasu and Katsuaki Tanaka</i>	
Combining Gaussian Mixture Models	666
<i>Hyoung-joo Lee and Sungzoon Cho</i>	
Global Convergence of Steepest Descent for Quadratic Functions.....	672
<i>Zhigang Zeng, De-Shuang Huang, and Zengfu Wang</i>	
Boosting Orthogonal Least Squares Regression.....	678
<i>Xunxian Wang and David J. Brown</i>	
Local Separation Property of the Two-Source ICA Problem with the One-Bit-Matching Condition	684
<i>Jinwen Ma, Zhiyong Liu, and Lei Xu</i>	
Two Further Gradient BYY Learning Rules for Gaussian Mixture with Automated Model Selection.....	690
<i>Jinwen Ma, Bin Gao, Yang Wang, and Qiansheng Cheng</i>	
Improving Support Vector Solutions by Selecting a Sequence of Training Subsets.....	696
<i>Tom Downs and Jianxiong Wang</i>	
Machine Learning for Matching Astronomy Catalogues	702
<i>David Rohde, Michael Drinkwater, Marcus Gallagher, Tom Downs, and Marianne Doyle</i>	
Boosting the Tree Augmented Naïve Bayes Classifier	708
<i>Tom Downs and Adelina Tang</i>	
Clustering Model Selection for Reduced Support Vector Machines	714
<i>Lih-Ren Jen and Yuh-Jye Lee</i>	
Generating the Reduced Set by Systematic Sampling	720
<i>Chien-Chung Chang and Yuh-Jye Lee</i>	