

International Conference on Artificial Intelligence and Pattern Recognition 2008

(AIPR-08)

**Orlando, Florida, USA
7 – 10 July 2008**

Editors:

**Bhanu Prasad
Pawan Sinha**

**Ashwin Ram
Etienne E. Kerre**

ISBN: 978-1-61567-718-4

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

Copyright© (2008) by the International Society for Research in Science and Technology
All rights reserved.

Printed by Curran Associates, Inc. (2009)

For permission requests, please contact the International Society for Research in Science and Technology
at the address below.

ISRST (public relations)
PO Box 2464
Tallahassee, FL 32316 - 2464
USA

isrst@isrst.org

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2634
Email: curran@proceedings.com
Web: www.proceedings.com

Contents

| | |
|--|----|
| Multiclass Least Squares Reproducing Kernel Support Vector Machines..... | 1 |
| Yongzhong Xing, Xiaobei Wu, Zhiliang Xu | |
| Recognition of Urdu Language Spoken Numbers with Neural Networks..... | 5 |
| S K Hasnain, Pervez Akhtar | |
| Color Image Segmentation Based on 2D Symlet Wavelet Transform..... | 13 |
| Yas A. Alsultanny | |
| Generalization of Adaptive Incremental Learning RBF Network Trained with Significant Patterns..... | 21 |
| T N Nagabhushan, S K Padma, Bhanu Prasad | |
| On the Performance Analysis of Resource Allocating Network Trained with Significant Patterns..... | 27 |
| T N Nagabhushan, S K Padma, Bhanu Prasad | |
| Case-Based Motion Controller for Humanoid Robot..... | 32 |
| Hans-Dieter Burkhard, Abdel Badeeh M.Salem, Bassant M. El Bagoury | |
| Base improved BP network mapping “semantic gap”..... | 38 |
| Dongguang Wang, Zhichao Peng, Qingxian Que | |
| An algorithmic approach based on Fuzzy Vector Quantization and Wavelet decomposition for Image Compression..... | 43 |
| Vipula Singh, Navin Rajpal, K. Srikanta Murthy | |
| Ensemble Classification for Parsing Arabic Texts: A Theoretical Approach..... | 51 |
| Fériel Ben Fraj, Chiraz Ben Othmane Zribi, Mohamed Ben Ahmed | |
| The Universal Table of Algorithms of AI and Octava Computer..... | 58 |
| P.R. Andronov, S.A. Arutyunyan, V.P. Khamikhin, O.I. Timofeev | |
| Classification using Normalized Compression Distance..... | 63 |
| Uri Shaham, Yael Edan | |
| Ant Colony Optimization based Dynamic Scheduling Algorithm for Real-Time Operating Systems..... | 70 |
| Ketan Kotecha, Apurva Shah | |

| | |
|--|-----|
| Real time face recognition from video stream using eigen faces..... | 75 |
| Fatma_zohra Chelali, Amar Djeradi | |
| Feature based and PCA based Face Recognition..... | 81 |
| Praseeda Lekshmi V., M.Sasikumar, Divya S. Vidyadharan | |
| Biological Early Brain Cancer Detection Using Artificial Neural Networks..... | 89 |
| G.Jagadeesh kumar, G.Vijay kumar | |
| A Novel Grey-based Feature Selection Method with One-Feature Reverse Operation..... | 94 |
| Chi-Chun Huang, Hsin-Yun Chang | |
| Development of Expert System for Process Pump Selection..... | 102 |
| M Ramulu, S Anand Kumar, DVR Murty | |
| Fuzzy Base Management System for Color Name Identification..... | 110 |
| Dipti Shah, Apurva Shah | |
| Probability Density Estimation by Decomposition of Correlation Integral..... | 113 |
| Marcel Jirina, Marcel Jirina jr. | |
| Unsupervised Hyperspectral Image Analysis with Projection Pursuit and MRF Segmentation Approach..... | 120 |
| A Sarkar, A Vulimiri, S Bose, S Paul, S S Ray | |
| Image Registration Using Dynamic Space Warping..... | 128 |
| Rhoda Baggs, Dan E. Tamir | |
| NELFD: Neuroevolved Descriptor for Local Image Features..... | 136 |
| Mateusz Skoczewski, Hitoshi Maekawa | |
| Improved C-Fuzzy Decision Tree with Controllable Membership Characteristics for Intrusion Detection..... | 140 |
| KrishnaMoorthi Makkithaya, N.V.Subba Reddy, U.Dinesh Acharya | |
| A Coherent and Heterogeneous Approach to Clustering..... | 146 |
| Arian Maleki, Nima Asgharbeygi | |
| Principles of Digital Evolution Machines..... | 153 |
| Istvan Elek | |
| Gaussian Process Based Dual Latent Function Approach to Ordinal Regression..... | 159 |
| Atulya Velivelli, Thomas S. Huang | |
| The Clusterization Process in an Adaptive Method of Image Segmentation..... | 170 |
| Zygmunt Wróbel, Aleksander Lamza | |

| | |
|--|-----|
| Spam Sender Detection with Classification Modeling on Highly Imbalanced Mail Server Behavior Data..... | 174 |
| Yuchun Tang, Sven Krasser, Dmitri Alperovitch, Paul Judge | |
| A Hybrid Algorithm for Training Recurrent Fuzzy Neural Network..... | 181 |
| S.M.A. Salehizadeh, P. Yadmellat, A.R. Pourshoghi, M.J. Aein | |
| Parallel Direct Solver for hp Finite Element Method Controlled by Composite Programmable Graph Grammar..... | 187 |
| Maciej Paszynski | |
| Internal vs. External Parameters in Fitness Functions..... | 195 |
| Pedro A. Diaz-Gomez, Dean F. Hougen | |
| Principles of Artificial Economics in Animal Minds..... | 200 |
| Venkatamuni.V, Darryl. N. Davis | |
| Evaluation of Facility Layout using DEA and its Verification by Simulation..... | 208 |
| Yutaka SHIRAI | |
| Modified Hybrid Feature Set for Anglo-Assamese Hand Written Numeral Recognition..... | 214 |
| Kandarpa Kumar Sarma | |
| Single Pass Clustering and Classification of Large Dissimilarity Datasets..... | 219 |
| Alexander Hasenfuss, Barbara Hammer | |
| Self-Learning Expert Systems using Rule Classifier in Detection Engines..... | 224 |
| Uday Kamath | |
| Finding Hidden Functional Dependencies in Relations Efficiently..... | 228 |
| Hyontai Sug | |
| A nonlinear recurrent neural network estimation of conditional mean and variance..... | 232 |
| Porntip Dechpichai, Pamela Davy | |
| Evolving Genetic Programs for Problems with Non-Functional Requirements..... | 240 |
| David Alfred Ostrowski, George Schleis | |
| Handling Data Imperfections in Classification Problems using a Belief Theory Approach..... | 246 |
| Sadith Weerakkody, Jinsong Zhang, David Roelant, Hao Zhu, Kang Yen | |
| Pattern-based Extraction of Causal Relations in Korean..... | 254 |
| Sheen-Mok Lee, Hyun-Shu Kim | |
| Knowledge, Computational Models, Semantic Networks and Concept Maps..... | 260 |
| Peeter Lorents | |

| | |
|---|-----|
| Exploration of neuro-fuzzy models in real time flood forecasting..... | 264 |
| D. Han, H.X. Lee | |
| Score Normalisation of Voice Features for Template Free Biometric Encryption..... | 269 |
| Joshua A. Atah, Gareth Howells | |
| Case-Based Reasoning Framework for Generating Wide-Range Decision Support Systems.... | 273 |
| Vladimir Kurbalija, Mirjana Ivanovic, Zoran Budimac | |
| A New Information Theoretic Clustering Algorithm for Robust Unsupervised Classification..... | 280 |
| Turgay Temel | |
| A Generalization of Shannon’s Mutual Information for Improved Feature Selection in Databases Involving Possibly Rare but Well-Predictable Classes..... | 284 |
| Olcay Kursun | |
| Data Extraction for Pattern Recognition using Preprocessed Multivariate Analysis..... | 289 |
| Deok Hee Nam | |
| Predictive Soil Mapping using Hybridization Scheme of Case Based Reasoning System and Knowledge Based System..... | 295 |
| J.L. Bind, P.K. Garg | |
| Image Classification using Chip Mining Approach for Remote Sensing Imagery..... | 302 |
| J.L. Bind, Piyush Gupta | |

AUTHOR INDEX