Data clustering : a user's dilemma p. 1
Pattern recognition in video p. 11
Rough sets in perception-based computing p. 21
Conversational case-based reasoning p. 30
Computational molecular biology of genome expression and regulation p. 31
Human activity recognition p. 39
A novel T\(^2\)-SVM for partially supervised classification p. 40
S-Kernel : a new symmetry measure p. 50
Geometric decision rules for instance-based learning problems p. 60
Building brains for robots : a psychodynamic approach p. 70
Designing smart environments : a paradigm based on learning and prediction p. 80
Towards generic pattern mining p. 91
Multi-aspect data analysis in brain informatics p. 98
Small object detection and tracking : algorithm, analysis and application p. 108
Illumination invariant face alignment using multi-band active appearance model p. 118
Globally optimal 3D image reconstruction and segmentation via energy minimisation techniques p. 128
Go digital, go fuzzy p. 137
A novel personal authentication system using palmprint technology p. 147
World wide wisdom Web (W4) and autonomy oriented computing (AOC) : what, when, and how? p. 157
Semantic Web research trends and directions p. 160
Feature extraction for nonlinear classification p. 170
Anomaly detection in a multi-engine aircraft p. 176
Clustering within quantum mechanical framework p. 182
Linear penalization support vector machines for feature selection p. 188
Linear regression for dimensionality reduction and classification of multi dimensional data p. 193
A new approach for high-dimensional unsupervised learning : applications to image restoration p. 200
Unsupervised classification of remote sensing data using graph cut-based initialization p. 206
Hybrid hierarchical learning from dynamic scenes p. 212
Reference extraction and resolution for legal texts p. 218
Effective intrusion type identification with edit distance for HMM-based anomaly detection system p. 222
A combined fBm and PPCA based signal model for on-line recognition of PD signal p. 229
Handwritten Bangla digit recognition using classifier combination through DS technique p. 236
Arrhythmia classification using local holder exponents and support vector machine p. 242
A voltage sag pattern classification technique p. 248
Face recognition using topological manifolds learning p. 254
A context-sensitive technique based on support vector machines for image classification p. 260
Face recognition technique using symbolic PCA method p. 266
A hybrid approach to speaker recognition in multi-speaker environment p. 272
Design of hierarchical classifier with hybrid architectures p. 276
Human-computer interaction system with artificial neural network using motion tracker and data glove p. 280
Recurrent neural approaches for power transformers thermal modeling p. 287
Artificial neural network engine: parallel and parameterized architecture implemented in FPGA p. 294
Neuronal clustering of brain fMRI images p. 300
An optimum RBF network for signal detection in non-Gaussian noise p. 306
A holistic classification system for check amounts based on neural networks with rejection p. 310
A novel 3D face recognition algorithm using template based registration strategy and artificial neural networks p. 315
Recognition of fault signature patterns using fuzzy logic for prevention of breakdowns in steel continuous casting process p. 318
Development of an adaptive fuzzy logic based control law for a mobile robot with an uncalibrated camera system p. 325
Fuzzy logic based control of voltage and reactive power in subtransmission system p. 332
Fuzzy-symbolic analysis for classification of symbolic data p. 338
Handwritten character recognition systems using image-fusion and fuzzy logic p. 344
Classification of remotely sensed images using neural-network ensemble and fuzzy integration p. 350
Intelligent learning rules for fuzzy control of a vibrating screen p. 356
Fuzzy proximal support vector classification via generalized eigenvalues p. 360
Segmentation of MR images of the human brain using fuzzy adaptive radial basis function neural network p. 364
Design of two-dimensional IIR filters using an improved DE algorithm p. 369
Systematically evolving configuration parameters for computational intelligence methods p. 376
A split-based method for polygonal approximation of shape curves p. 382
Symbolic data structure for postal address representation and address validation through symbolic knowledge base p. 388
The linear factorial smoothing for the analysis of incomplete data p. 395
An improved shape descriptor using Bezier curves p. 401
Isothetic polygonal approximations of a 2D object on generalized grid p. 407
An evolutionary SPDE breeding-based hybrid particle swarm optimizer: application in coordination of robot ants for camera coverage area optimization p. 413
An improved differential evolution scheme for noisy optimization problems p. 417
Facial asymmetry in frequency domain: the "phase" connection p. 422
An efficient image distortion correction method for an X-ray digital tomosynthesis system p. 428
Eigen transformation based edge detector for gray images p. 434
Signal processing for digital image enhancement considering APL in PDP p. 441
A hybrid approach to digital image watermarking using singular value decomposition and spread spectrum p. 447
Image enhancement by high-order Gaussian derivative filters simulating non-classical receptive fields in the human visual system p. 453
A chosen plaintext steganalysis of Hide4PGP V 2.0 p. 459
Isolation of lung cancer from inflammation p. 465
Learning to segment document images p. 471
A comparative study of different texture segmentation techniques p. 477
Run length based steganography for binary images p. 481
An edge-based moving object detection for video surveillance p. 485
An information hiding framework for lightweight mobile devices with digital camera p. 491
Applications of the discrete Hodge Helmholtz decomposition to image and video processing p. 497
A novel CAM for the luminance levels in the same chromaticity viewing conditions p. 503
Estimation of 2D motion trajectories from video object planes and its application in hand gesture recognition p. 509
3D facial pose tracking in uncalibrated videos p. 515
Fusing depth and video using Rao-Blackwellized particle filter p. 521
Specifying spatio temporal relations for multimedia ontologies p. 527
Motion estimation of elastic articulated objects from image points and contours p. 533
Parsing news video using integrated audio-video features p. 538
A hybrid data and space partitioning technique for similarity queries on bounded clusters p. 544
Image retrieval by content using segmentation approach p. 551
A wavelet based image retrieval p. 557
Use of contourlets for image retrieval p. 563
Integration of keyword and feature based search for image retrieval applications p. 570
Finding locally and periodically frequent sets and periodic association rules p. 576
An efficient hybrid hierarchical agglomerative clustering (HHAC) technique for partitioning large data sets p. 583
Density-based view materialization p. 589
On simultaneous selection of prototypes and features in large data p. 595
Knowledge enhancement through ontology-guided text mining p. 601
A novel algorithm for automatic species identification using principal component analysis p. 605
Analyzing the effect of prior knowledge in genetic regulatory network inference p. 611
New genetic operators for solving TSP : application to microarray gene ordering p. 617
Genetic algorithm for double digest problem p. 623
Intelligent data recognition of DNA sequences using statistical models p. 630
Parallel sequence alignment : a lookahead approach p. 636
Evolutionary clustering algorithm with knowledge-based evaluation for fuzzy cluster analysis of gene expression profiles p. 640

Biological text mining for extraction of proteins and their interactions p. 645

DNA gene expression classification with ensemble classifiers optimized by speciated genetic algorithm p. 649

Multi-objective optimization for adaptive Web site generation p. 654

Speeding up Web access using weighted association rules p. 660

An automatic approach to classify Web documents using a domain ontology p. 666

Distribution based stemmer refinement p. 672

Text similarity measurement using concept representation of texts p. 678

Incorporating distance domination in multiobjective evolutionary algorithm p. 684

I-EMO : an interactive evolutionary multi-objective optimization tool p. 690

Simultaneous multiobjective multiple route selection using genetic algorithm for car navigation p. 696

Outliers in rough k-means clustering p. 702

Divisible rough sets based on self-organizing maps p. 708

Parallel island model for attribute reduction p. 714

On-line elimination of non-relevant parts of complex objects in behavioral pattern identification p. 720

Rough contraction through partial meets p. 726

Finding interesting rules exploiting rough memberships p. 732

Probability measures for prediction in multi-table information systems p. 738

Object extraction in gray-scale images by optimizing roughness measure of a fuzzy set p. 744

Approximation spaces in machine learning and pattern recognition p. 750

A rough set-based magnetic resonance imaging partial volume detection system p. 756

Eliciting domain knowledge in handwritten digit recognition p. 762

Collaborative rough clustering p. 768

Learning of general cases p. 774

Learning similarity measure of nominal features in CBR classifiers p. 780

Decision tree induction with CBR p. 786

Rough set feature selection methods for case-based categorization of text documents p. 792

An efficient parzen-window based network intrusion detector using a pattern synthesis technique p. 799

Table of Contents provided by Blackwell's Book Services and R.R. Bowker. Used with permission.