

Table of Contents, Part I

Part I Theoretical Analysis

Approximation Bounds by Neural Networks in L^p_ω	1
<i>Jianjun Wang, ZongBen Xu, Weijun Xu</i>	
Geometric Interpretation of Nonlinear Approximation Capability for Feedforward Neural Networks	7
<i>Bao-Gang Hu, Hong-Jie Xing, Yu-Jiu Yang</i>	
Mutual Information and Topology 1: Asymmetric Neural Network	14
<i>David Dominguez, Kostadin Koroutchev, Eduardo Serrano, Francisco B. Rodríguez</i>	
Mutual Information and Topology 2: Symmetric Network	20
<i>Kostadin Koroutchev, David Dominguez, Eduardo Serrano, Francisco B. Rodríguez</i>	
Simplified PCNN and Its Periodic Solutions	26
<i>Xiaodong Gu, Liming Zhang, Daoheng Yu</i>	
On Robust Periodicity of Delayed Dynamical Systems with Time-Varying Parameters	32
<i>Changyin Sun, Xunming Li, Chun-Bo Feng</i>	
Delay-Dependent Criteria for Global Stability of Delayed Neural Network System	38
<i>Wenlian Lu, Tianping Chen</i>	
Stability Analysis of Uncertain Neural Networks with Delay	44
<i>Zhongsheng Wang, Hanlin He, Xiaoxin Liao</i>	
A New Method for Robust Stability Analysis of a Class of Recurrent Neural Networks with Time Delays	49
<i>Huaguang Zhang, Gang Wang</i>	
Criteria for Stability in Neural Network Models with Iterative Maps	55
<i>Carlos Aguirre, Doris Campos, Pedro Pascual, Eduardo Serrano</i>	
Exponential Stability Analysis for Neural Network with Parameter Fluctuations	61
<i>Haoyang Tang, Chuandong Li, Xiaofeng Liao</i>	

Local Stability and Bifurcation in a Model of Delayed Neural Network	67
<i>Yiping Lin, Zengrong Liu</i>	
On the Asymptotic Stability of Non-autonomous Delayed Neural Networks	72
<i>Qiang Zhang, Haijun Wang, Dongsheng Zhou, Xiaopeng Wei</i>	
Global Exponential Stability of Cohen-Grossberg Neural Networks with Multiple Time-Varying Delays	78
<i>Kun Yuan, Jinde Cao</i>	
Stability of Stochastic Cohen-Grossberg Neural Networks	84
<i>Lin Wang</i>	
A Novel Approach to Exponential Stability Analysis of Cohen-Grossberg Neural Networks	90
<i>Anhua Wan, Weihua Mao, Chun Zhao</i>	
Analysis for Global Robust Stability of Cohen-Grossberg Neural Networks with Multiple Delays	96
<i>Ce Ji, Huaguang Zhang, Huanxin Guan</i>	
On Robust Stability of BAM Neural Networks with Constant Delays	102
<i>Chuandong Li, Xiaofeng Liao, Yong Chen</i>	
Absolutely Exponential Stability of BAM Neural Networks with Distributed Delays	108
<i>Wenjun Xiong, Qiu hao Jiang</i>	
Stability Analysis of Discrete-Time Cellular Neural Networks	114
<i>Zhigang Zeng, De-Shuang Huang, Zengfu Wang</i>	
Novel Exponential Stability Criteria for Fuzzy Cellular Neural Networks with Time-Varying Delay	120
<i>Yong Chen, Xiaofeng Liao</i>	
Stability of Discrete Hopfield Networks with Delay in Serial Mode	126
<i>Runnian Ma, Youmin Xi, Hangshan Gao</i>	
Further Results for an Estimation of Upperbound of Delays for Delayed Neural Networks	132
<i>Xueming Li, Xiaofeng Liao, Tao Xiang</i>	
Synchronization in Two Uncoupled Chaotic Neurons	138
<i>Ying Wu, Jianxue Xu, Daihai He, Wuyin Jin, Mi He</i>	
Robust Synchronization of Coupled Delayed Recurrent Neural Networks	144
<i>Jin Zhou, Tianping Chen, Xiang Lan</i>	

Part II Learning and Optimization

Self-Optimizing Neural Networks	150
<i>Adrian Horzyk, Ryszard Tadeusiewicz</i>	
Genetically Optimized Self-Organizing Neural Networks Based on PNs and FPNs	156
<i>Ho-Sung Park, Sung-Kwun Oh, Witold Pedrycz, Hyun-Ki Kim</i>	
A New Approach to Self-Organizing Hybrid Fuzzy Polynomial Neural Networks: Synthesis of Computational Intelligence Technologies	162
<i>Ho-Sung Park, Sung-Kwun Oh, Witold Pedrycz, Daehee Park, Yongkab Kim</i>	
On Soft Learning Vector Quantization Based on Reformulation	168
<i>Jian Yu, Pengwei Hao</i>	
A New Approach to Self-Organizing Polynomial Neural Networks by Means of Genetic Algorithms	174
<i>Sung-Kwun Oh, Byoung-Jun Park, Witold Pedrycz, Yong-Soo Kim</i>	
Fuzzy-Kernel Learning Vector Quantization	180
<i>Daoqiang Zhang, Songcan Chen, Zhi-Hua Zhou</i>	
Genetic Generation of High-Degree-of-Freedom Feed-Forward Neural Networks	186
<i>Yen-Wei Chen, Sulistiyo, Zensho Nakao</i>	
Self-Organizing Feature Map Based Data Mining	193
<i>Shangming Yang, Yi Zhang</i>	
Diffusion and Growing Self-Organizing Map: A Nitric Oxide Based Neural Model	199
<i>Shuang Chen, Zongtan Zhou, Dewen Hu</i>	
A New Adaptive Self-Organizing Map	205
<i>Shifeng Weng, Fai Wong, Changshui Zhang</i>	
Evolving Flexible Neural Networks Using Ant Programming and PSO Algorithm	211
<i>Yuehui Chen, Bo Yang, Jiwen Dong</i>	
Surrogating Neurons in an Associative Chaotic Neural Network	217
<i>Masaharu Adachi</i>	
Ensembles of RBFs Trained by Gradient Descent	223
<i>Carlos Hernández-Espinosa, Mercedes Fernández-Redondo, Joaquín Torres-Sospedra</i>	

Gradient Descent Training of Radial Basis Functions	229
<i>Mercedes Fernández-Redondo, Carlos Hernández-Espinosa, Mamen Ortiz-Gómez, Joaquín Torres-Sospedra</i>	
Recent Developments on Convergence of Online Gradient Methods for Neural Network Training	235
<i>Wei Wu, Zhengxue Li, Guori Feng, Naimin Zhang, Dong Nan, Zhiqiong Shao, Jie Yang, Liqing Zhang, Yuesheng Xu</i>	
A Regularized Line Search Tunneling for Efficient Neural Network Learning	239
<i>Dae-Won Lee, Hyung-Jun Choi, Jaewook Lee</i>	
Transductive Learning Machine Based on the Affinity-Rule for Semi-supervised Problems and Its Algorithm	244
<i>Weijiang Long, Wenxiu Zhang</i>	
A Learning Algorithm with Gaussian Regularizer for Kernel Neuron	252
<i>Jianhua Xu, Xuegong Zhang</i>	
An Effective Learning Algorithm of Synergetic Neural Network	258
<i>Xiuli Ma, Licheng Jiao</i>	
Sparse Bayesian Learning Based on an Efficient Subset Selection	264
<i>Liefeng Bo, Ling Wang, Licheng Jiao</i>	
A Novel Fuzzy Neural Network with Fast Training and Accurate Generalization	270
<i>Lipo Wang, Bing Liu, Chunru Wan</i>	
Tuning Neuro-fuzzy Function Approximator by Tabu Search	276
<i>Guangyuan Liu, Yonghui Fang, Xufei Zheng, Yuhui Qiu</i>	
Finite Convergence of MRI Neural Network for Linearly Separable Training Patterns	282
<i>Lijun Liu, Wei Wu</i>	
A Rapid Two-Step Learning Algorithm for Spline Activation Function Neural Networks with the Application on Biped Gait Recognition	286
<i>Lingyun Hu, Zengqi Sun</i>	
An Online Feature Learning Algorithm Using HCI-Based Reinforcement Learning	293
<i>Fang Liu, Jianbo Su</i>	
Optimizing the Weights of Neural Networks Based on Antibody Clonal Simulated Annealing Algorithm	299
<i>Xiaoyi Jin, Haifeng Du, Wuhong He, Licheng Jiao</i>	

Backpropagation Analysis of the Limited Precision on High-Order Function Neural Networks	305
<i>Minghu Jiang, Georges Gielen</i>	
LMS Adaptive Notch Filter Design Based on Immune Algorithm	311
<i>Xiaoping Chen, Jianfeng Gao</i>	
Training Radial Basis Function Networks with Particle Swarms	317
<i>Yu Liu, Qin Zheng, Zhewen Shi, Junying Chen</i>	
Optimizing Weights by Genetic Algorithm for Neural Network Ensemble	323
<i>Zhang-Quan Shen, Fan-Sheng Kong</i>	
Survival Density Particle Swarm Optimization for Neural Network Training	332
<i>Hongbo Liu, Bo Li, Xiukun Wang, Ye Ji, Yiyuan Tang</i>	
Modified Error Function with Added Terms for the Backpropagation Algorithm	338
<i>Weixing Bi, Xugang Wang, Ziliang Zong, Zheng Tang</i>	
Robust Constrained-LMS Algorithm	344
<i>Xin Song, Jinkuan Wang, Han Wang</i>	
A Novel Three-Phase Algorithm for RBF Neural Network Center Selection	350
<i>Dae-Won Lee, Jaewook Lee</i>	
Editing Training Data for k NN Classifiers with Neural Network Ensemble	356
<i>Yuan Jiang, Zhi-Hua Zhou</i>	
Learning Long-Term Dependencies in Segmented Memory Recurrent Neural Networks	362
<i>Jinmiao Chen, Narendra S. Chaudhari</i>	
An Optimal Neural-Network Model for Learning Posterior Probability Functions from Observations	370
<i>Chengan Guo, Anthony Kuh</i>	
The Layered Feed-Forward Neural Networks and Its Rule Extraction	377
<i>Ray Tsaih, Chih-Chung Lin</i>	
Analysing Contributions of Components and Factors to Pork Odour Using Structural Learning with Forgetting Method	383
<i>Leilei Pan, Simon X. Yang, Fengchun Tian, Lambert Otten, Roger Hacker</i>	
On Multivariate Calibration Problems	389
<i>Guo-Zheng Li, Jie Yang, Jun Lu, Wen-Cong Lu, Nian-Yi Chen</i>	

Control of Associative Chaotic Neural Networks Using a Reinforcement Learning 395
Norihisa Sato, Masaharu Adachi, Makoto Kotani

A Method to Improve the Transiently Chaotic Neural Network 401
Xinshun Xu, Jiahai Wang, Zheng Tang, Xiaoming Chen, Yong Li, Guangpu Xia

A New Neural Network for Nonlinear Constrained Optimization Problems 406
Zhiqing Meng, Chuangyin Dang, Gengui Zhou, Yihua Zhu, Min Jiang

Delay PCNN and Its Application for Optimization 413
Xiaodong Gu, Liming Zhang, Daoheng Yu

A New Parallel Improvement Algorithm for Maximum Cut Problem 419
Guangpu Xia, Zheng Tang, Jiahai Wang, Ronglong Wang, Yong Li, Guang'an Xia

A New Neural Network Algorithm for Clique Vertex-Partition Problem 425
Jiahai Wang, Xinshun Xu, Zheng Tang, Weixing Bi, Xiaoming Chen, Yong Li

An Algorithm Based on Hopfield Network Learning for Minimum Vertex Cover Problem 430
Xiaoming Chen, Zheng Tang, Xinshun Xu, Songsong Li, Guangpu Xia, Jiahai Wang

A Subgraph Isomorphism Algorithm Based on Hopfield Neural Network 436
Ensheng Yu, Xicheng Wang

A Positively Self-Feedbacked Hopfield Neural Network for N-Queens Problem 442
Yong Li, Zheng Tang, Ronglong Wang, Guangpu Xia, Jiahai Wang

NN-Based GA for Engineering Optimization 448
Ling Wang, Fang Tang

Applying GENET to the JSSCSOP 454
Xin Feng, Lixin Tang, Hofung Leung

Part III Support Vector Machines

Improvements to Bennett's Nearest Point Algorithm for Support Vector Machines 462
Jianmin Li, Jianwei Zhang, Bo Zhang, Fuzong Lin

Distance-Based Selection of Potential Support Vectors by Kernel Matrix 468
Baoqing Li

A Learning Method for Robust Support Vector Machines	474
<i>Jun Guo, Norikazu Takahashi, Tetsuo Nishi</i>	
A Cascade Method for Reducing Training Time and the Number of Support Vectors	480
<i>Yi-Min Wen, Bao-Liang Lu</i>	
Minimal Enclosing Sphere Estimation and Its Application to SVMs Model Selection	487
<i>Huaqing Li, Shaoyu Wang, Feihu Qi</i>	
Constructing Support Vector Classifiers with Unlabeled Data	494
<i>Tao Wu, Han-Qing Zhao</i>	
Nested Buffer SMO Algorithm for Training Support Vector Classifiers	500
<i>Xiang Wu, Wenkai Lu</i>	
Support Vector Classifier with a Fuzzy-Value Class Label	506
<i>Chan-Yun Yang</i>	
RBF Kernel Based Support Vector Machine with Universal Approximation and Its Application	512
<i>Junping Wang, Quanshi Chen, Yong Chen</i>	
A Practical Parameters Selection Method for SVM	518
<i>Yongsheng Zhu, Chunhung Li, Youyun Zhang</i>	
Ho–Kashyap with Early Stopping Versus Soft Margin SVM for Linear Classifiers – An Application	524
<i>Fabien Lauer, Mohamed Bentoumi, Gérard Bloch, Gilles Millerioux, Patrice Aknin</i>	
Radar HRR Profiles Recognition Based on SVM with Power-Transformed-Correlation Kernel	531
<i>Hongwei Liu, Zheng Bao</i>	
Hydrocarbon Reservoir Prediction Using Support Vector Machines	537
<i>Kaifeng Yao, Wenkai Lu, Shanwen Zhang, Huanqin Xiao, Yanda Li</i>	
Toxic Vapor Classification and Concentration Estimation for Space Shuttle and International Space Station	543
<i>Tao Qian, Roger Xu, Chiman Kwan, Bruce Linnell, Rebecca Young</i>	
Optimal Watermark Detection Based on Support Vector Machines	552
<i>Yonggang Fu, Ruimin Shen, Hongtao Lu</i>	
Online LS-SVM Learning for Classification Problems Based on Incremental Chunk	558
<i>Zhifeng Hao, Shu Yu, Xiaowei Yang, Feng Zhao, Rong Hu, Yanchun Liang</i>	

A Novel Approach to Clustering Analysis Based on Support Vector Machine	565
<i>Zhonghua Li, ShaoBai Chen, Rirong Zheng, Jianping Wu, Zongyuan Mao</i>	
Application of Support Vector Machine in Queuing System	571
<i>Gensheng Hu, Feiqi Deng</i>	
Modelling of Chaotic Systems with Novel Weighted Recurrent Least Squares Support Vector Machines	578
<i>Jiancheng Sun, Taiyi Zhang, Haiyuan Liu</i>	
Nonlinear System Identification Based on an Improved Support Vector Regression Estimator	586
<i>Li Zhang, Yugeng Xi</i>	
Anomaly Detection Using Support Vector Machines	592
<i>Shengfeng Tian, Jian Yu, Chuanhuan Yin</i>	
Power Plant Boiler Air Preheater Hot Spots Detection System Based on Least Square Support Vector Machines	598
<i>Liu Han, Liu Ding, Jin Yu, Qi Li, Yanming Liang</i>	
Support Vector Machine Multiuser Detector for TD-SCDMA Communication System in Multipath Channels	605
<i>Yonggang Wang, Licheng Jiao, Dongfang Zhao</i>	
Eyes Location by Hierarchical SVM Classifiers	611
<i>Yunfeng Li, Zongying Ou</i>	
Classification of Stellar Spectral Data Using SVM	616
<i>Fei Xing, Ping Guo</i>	
Iris Recognition Using Support Vector Machines	622
<i>Yong Wang, Jiuqiang Han</i>	
Heuristic Genetic Algorithm-Based Support Vector Classifier for Recognition of Remote Sensing Images	629
<i>Chunhong Zheng, Guiwen Zheng, Licheng Jiao</i>	
Landmine Feature Extraction and Classification of GPR Data Based on SVM Method	636
<i>Jing Zhang, Qun Liu, Baikunth Nath</i>	
Occupant Classification for Smart Airbag Using Stereovision and Support Vector Machines	642
<i>Hyun-Gu Lee, Yong-Guk Kim, Min-Soo Jang, Sang-Jun Kim, Soek-Joo Lee, Gwi-Tae Park</i>	
Support Vector Machine Committee for Classification	648
<i>Bing-Yu Sun, De-Shuang Huang, Lin Guo, Zhong-Qiu Zhao</i>	

Automatic Modulation Classification by Support Vector Machines	654
<i>Zhijin Zhao, Yunshui Zhou, Fei Mei, Jiandong Li</i>	

Part IV Blind Source Separation, Independent Component Analysis and Principal Component Analysis

Blind Source Separation Using for Time-Delay Direction Finding	660
<i>Gaoming Huang, Luxi Yang, Zhenya He</i>	
Frequency-Domain Separation Algorithms for Instantaneous Mixtures	666
<i>Tiemin Mei, Fuliang Yin</i>	
Cumulant-Based Blind Separation of Convolutional Mixtures	672
<i>Tiemin Mei, Fuliang Yin, Jiangtao Xi, Joe F. Chicharo</i>	
A New Blind Source Separation Method Based on Fractional Lower Order Statistics and Neural Network	678
<i>Daifeng Zha, Tianshuang Qiu, Hong Tang, Yongmei Sun, Sen Li, Lixin Shen</i>	
A Clustering Approach for Blind Source Separation with More Sources than Mixtures	684
<i>Zhenwei Shi, Huanwen Tang, Yiyuan Tang</i>	
A Blind Source Separation Algorithm with Linear Prediction Filters	690
<i>Zhijin Zhao, Fei Mei, Jiandong Li</i>	
A Blind Source Separation Based Micro Gas Sensor Array Modeling Method	696
<i>Guangfen Wei, Zhenan Tang, Philip C.H. Chan, Jun Yu</i>	
A Novel Denoising Algorithm Based on Feedforward Multilayer Blind Separation	702
<i>Xiefeng Cheng, Ju Liu, Jianping Qiao, Yewei Tao</i>	
The Existence of Spurious Equilibrium in FastICA	708
<i>Gang Wang, Dewen Hu</i>	
Hardware Implementation of Pulsed Neural Networks Based on Delta-Sigma Modulator for ICA	714
<i>Hirohisa Hotta, Yoshimitsu Murahashi, Shinji Doki, Shigeru Okuma</i>	
Study on Object Recognition Based on Independent Component Analysis	720
<i>Xuming Huang, Chengming Liu, Liming Zhang</i>	
Application of ICA Method for Detecting Functional MRI Activation Data	726
<i>Minfen Shen, Weiling Xu, Jinyao Yang, Patch Beadle</i>	

Single-Trial Estimation of Multi-channel VEP Signals Using Independent Component Analysis 732
Lisha Sun, Minfen Shen, Weiling Xu, Francis Chan

Data Hiding in Independent Components of Video 738
Jiande Sun, Ju Liu, Huibo Hu

Multisensor Data Fusion Based on Independent Component Analysis for Fault Diagnosis of Rotor 744
Xiaojiang Ma, Zhihua Hao

Substructural Damage Detection Using Neural Networks and ICA 750
Fuzheng Qu, Dali Zou, Xin Wang

Speech Segregation Using Constrained ICA 755
Qiu-Hua Lin, Yong-Rui Zheng, Fuliang Yin, Hua-Lou Liang

Adaptive RLS Implementation of Non-negative PCA Algorithm for Blind Source Separation 761
Xiao-Long Zhu, Xian-Da Zhang, Ying Jia

Progressive Principal Component Analysis 768
Jun Liu, Songcan Chen, Zhi-Hua Zhou

Extracting Target Information in Multispectral Images Using a Modified KPCA Approach 774
Zhan-Li Sun, De-Shuang Huang

Use PCA Neural Network to Extract the PN Sequence in Lower SNR DS/SS Signals 780
Tianqi Zhang, Xiaokang Lin, Zhengzhong Zhou

Hierarchical PCA-NN for Retrieving the Optical Properties of Two-Layer Tissue Model 786
Yaqin Chen, Ling Lin, Gang Li, Jianming Gao, Qilian Yu

Principal Component Analysis Neural Network Based Probabilistic Tracking of Unpaved Road 792
Qing Li, Nannig Zheng, Lin Ma, Hong Cheng

Chemical Separation Process Monitoring Based on Nonlinear Principal Component Analysis 798
Fei Liu, Zhonggai Zhao

An Adjusted Gaussian Skin-Color Model Based on Principal Component Analysis 804
Zhi-Gang Fan, Bao-Liang Lu

Convergence Analysis for Oja+ MCA Learning Algorithm 810
Jiancheng Lv, Mao Ye, Zhang Yi

On the Discrete Time Dynamics of the MCA Neural Networks	815
<i>Mao Ye, Zhang Yi</i>	
The Cook Projection Index Estimation Using the Wavelet Kernel Function	822
<i>Wei Lin, Tian Zheng, Fan He, Xian-bin Wen</i>	

Part V Clustering and Classification

Automatic Cluster Number Determination via BYY Harmony Learning	828
<i>Xuelei Hu, Lei Xu</i>	
Unsupervised Learning for Hierarchical Clustering Using Statistical Information	834
<i>Masaru Okamoto, Nan Bu, Toshio Tsuji</i>	
Document Clustering Algorithm Based on Tree-Structured Growing Self-Organizing Feature Map	840
<i>Xiaoshen Zheng, Wenling Liu, Pilian He, Weidi Dai</i>	
Improved SOM Clustering for Software Component Catalogue	846
<i>Zhuo Wang, Daxin Liu, Xiaoning Feng</i>	
Classification by Multilayer Feedforward Ensembles	852
<i>Mercedes Fernández-Redondo, Carlos Hernández-Espinosa, Joaquín Torres-Sospedra</i>	
Robust Face Recognition from a Single Training Image per Person with Kernel-Based SOM-Face	858
<i>Xiaoyang Tan, Songcan Chen, Zhi-Hua Zhou, Fuyan Zhang</i>	
Unsupervised Feature Selection for Multi-class Object Detection Using Convolutional Neural Networks	864
<i>Masakazu Matsugu, Pierre Cardon</i>	
Recurrent Network as a Nonlinear Line Attractor for Skin Color Association	870
<i>Ming-Jung Seow, Vijayan K. Asari</i>	
A Bayesian Classifier by Using the Adaptive Construct Algorithm of the RBF Networks	876
<i>Minghu Jiang, Dafan Liu, Beixing Deng, Georges Gielen</i>	
An Improved Analytical Center Machine for Classification	882
<i>FanZi Zeng, DongSheng Li, ZhengDing Qiu</i>	
Analysis of Fault Tolerance of a Combining Classifier	888
<i>Hai Zhao, Bao-Liang Lu</i>	

Training Multilayer Perceptron with Multiple Classifier Systems	894
<i>Hui Zhu, Jiafeng Liu, Xianglong Tang, Jianhuan Huang</i>	
Learning the Supervised NLDR Mapping for Classification	900
<i>Zhonglin Lin, Shifeng Weng, Changshui Zhang, Naijiang Lu, Zhimin Xia</i>	
Comparison with Two Classification Algorithms of Remote Sensing Image Based on Neural Network	906
<i>Yumin Chen, Youchuan Wan, Jianya Gong, Jin Chen</i>	
Some Experiments with Ensembles of Neural Networks for Classification of Hyperspectral Images	912
<i>Carlos Hernández-Espinosa, Mercedes Fernández-Redondo, Joaquín Torres-Sospedra</i>	
SAR Image Recognition Using Synergetic Neural Networks Based on Immune Clonal Programming	918
<i>Shuiping Gou, Licheng Jiao</i>	
Speaker Identification Using Reduced RBF Networks Array	924
<i>Han Lian, Zheng Wang, Jianjun Wang, Liming Zhang</i>	
Underwater Acoustic Targets Classification Using Welch Spectrum Estimation and Neural Networks	930
<i>Chunyu Kang, Xinhua Zhang, Anqing Zhang, Hongwen Lin</i>	
Automatic Digital Modulation Recognition Using Wavelet Transform and Neural Networks	936
<i>Zhilu Wu, Guanghui Ren, Xuexia Wang, Yaqin Zhao</i>	
Local Face Recognition Based on the Combination of ICA and NFL	941
<i>Yisong Ye, Yan Wu, Mingliang Sun, Mingxi Jin</i>	
Facial Expression Recognition Using Kernel Discriminant Plane	947
<i>Wenming Zheng, Xiaoyan Zhou, Cairong Zou, Li Zhao</i>	
Application of CMAC-Based Networks on Medical Image Classification	953
<i>Weidong Xu, Shunren Xia, Hua Xie</i>	
Seismic Pattern Recognition of Nuclear Explosion Based on Generalization Learning Algorithm of BP Network and Genetic Algorithm	959
<i>Daizhi Liu, Renming Wang, Xihai Li, Zhigang Liu</i>	
A Remote Sensing Image Classification Method Using Color and Texture Feature	965
<i>Wen Cao, Tian-Qiang Peng, Bi-Cheng Li</i>	

Remote Sensing Image Classification Based on Evidence Theory and Neural Networks	971
<i>Gang Chen, Bi-Cheng Li, Zhi-Gang Guo</i>	
Neural Networks in Detection and Identification of Littoral Oil Pollution by Remote Sensing	977
<i>Bin Lin, Jubai An, Carl Brown, Hande Zhang</i>	
Identifying Pronunciation-Translated Names from Chinese Texts Based on Support Vector Machines	983
<i>Lishuang Li, Chunrong Chen, Degen Huang, Yuansheng Yang</i>	
FPGA Implementation of Feature Extraction and Neural Network Classifier for Handwritten Digit Recognition	988
<i>Dongsheng Shen, Lianwen Jin, Xiaobin Ma</i>	
Replicator Neural Networks for Outlier Modeling in Segmental Speech Recognition	996
<i>László Tóth, Gábor Gosztolya</i>	
A Novel Approach to Stellar Recognition by Combining EKF and RBF Net	1002
<i>Ling Bai, Ping Guo</i>	
Pattern Recognition Based on Stability of Discrete Time Cellular Neural Networks	1008
<i>Zhigang Zeng, De-Shuang Huang, Zengfu Wang</i>	
The Recognition of the Vehicle License Plate Based on Modular Networks	1015
<i>Guangrong Ji, Hongjie Yi, Bo Qin, Hua Xu</i>	
Neural Network Associator for Images and Their Chinese Characters	1021
<i>Zhao Zhang</i>	
Exploring Various Features to Optimize Hot Topic Retrieval on WEB	1025
<i>Lan You, Xuanjing Huang, Lide Wu, Hao Yu, Jun Wang, Fumihito Nishino</i>	
Author Index	1033

Table of Contents, Part II

Part VI Robotics and Control

Application of RBFNN for Humanoid Robot Real Time Optimal Trajectory Generation in Running	1
<i>Xusheng Lei, Jianbo Su</i>	
Full-DOF Calibration-Free Robotic Hand-Eye Coordination Based on Fuzzy Neural Network	7
<i>Jianbo Su, Qielu Pan, Zhiwei Luo</i>	
Neuro-Fuzzy Hybrid Position/Force Control for a Space Robot with Flexible Dual-Arms	13
<i>Fuchun Sun, Hao Zhang, Hao Wu</i>	
Fuzzy Neural Networks Observer for Robotic Manipulators Based on H_∞ Approach	19
<i>Hong-bin Wang, Chun-di Jiang, Hong-rui Wang</i>	
Mobile Robot Path-Tracking Using an Adaptive Critic Learning PD Controller	25
<i>Xin Xu, Xuening Wang, Dewen Hu</i>	
Reinforcement Learning and ART2 Neural Network Based Collision Avoidance System of Mobile Robot	35
<i>Jian Fan, GengFeng Wu, Fei Ma, Jian Liu</i>	
FEL-Based Adaptive Dynamic Inverse Control for Flexible Spacecraft Attitude Maneuver	42
<i>Yaqiu Liu, Guangfu Ma, Qinglei Hu</i>	
Multivariable Generalized Minimum Variance Control Based on Artificial Neural Networks and Gaussian Process Models	52
<i>Daniel Sbarbaro, Roderick Murray-Smith, Arturo Valdes</i>	
A Neural Network Based Method for Solving Discrete-Time Nonlinear Output Regulation Problem in Sampled-Data Systems	59
<i>Dan Wang, Jie Huang</i>	
The Design of Fuzzy Controller by Means of CI Technologies-Based Estimation Technique	65
<i>Sung-Kwun Oh, Seok-Beom Roh, Dong-Yoon Lee, Sung-Whan Jang</i>	

A Neural Network Adaptive Controller for Explicit Congestion Control with Time Delay	71
<i>Bo Yang, Xinping Guan</i>	
Robust Adaptive Control Using Neural Networks and Projection	77
<i>Xiaou Li, Wen Yu</i>	
Design of PID Controllers Using Genetic Algorithms Approach for Low Damping, Slow Response Plants	83
<i>PenChen Chou, TsenJar Hwang</i>	
Neural Network Based Fault Tolerant Control of a Class of Nonlinear Systems with Input Time Delay	91
<i>Ming Liu, Peng Liu, Donghua Zhou</i>	
Run-to-Run Iterative Optimization Control of Batch Processes	97
<i>Zhijia Xiong, Jie Zhang, Xiong Wang, Yongmao Xu</i>	
Time-Delay Recurrent Neural Networks for Dynamic Systems Control	104
<i>Xu Xu, Yinghua Lu, Yanchun Liang</i>	
Feedforward-Feedback Combined Control System Based on Neural Network	110
<i>Weidong Zhang, Fanming Zeng, Guojun Cheng, Shengguang Gong</i>	
Online Learning CMAC Neural Network Control Scheme for Nonlinear Systems	117
<i>Yuman Yuan, Wenjin Gu, Jinyong Yu</i>	
Pole Placement Control for Nonlinear Systems via Neural Networks	123
<i>Fei Liu</i>	
RBF NN-Based Backstepping Control for Strict Feedback Block Nonlinear System and Its Application	129
<i>Yunan Hu, Yuqiang Jin, Pingyuan Cui</i>	
Model Reference Control Based on SVM	138
<i>Junfeng He, Zengke Zhang</i>	
PID Controller Based on the Artificial Neural Network	144
<i>Jianhua Yang, Wei Lu, Wenqi Liu</i>	
Fuzzy Predictive Control Based on PEMFC Stack	150
<i>Xi Li, Xiao-wei Fu, Guang-yi Cao, Xin-jian Zhu</i>	
Adaptive Control for Induction Servo Motor Based on Wavelet Neural Networks	156
<i>Qinghui Wu, Yi Liu, Dianjun Zhang, Yonghui Zhang</i>	

The Application of Single Neuron Adaptive PID Controller in Control System of Triaxial and Torsional Shear Apparatus	163
<i>Muguo Li, Zhendong Liu, Jing Wang, Qun Zhang, Hairong Jiang, Hai Du</i>	
Ram Velocity Control in Plastic Injection Molding Machines with Neural Network Learning Control	169
<i>Gaoxiang Ouyang, Xiaoli Li, Xinping Guan, Zhiqiang Zhang, Xiuling Zhang, Ruxu Du</i>	
Multiple Models Neural Network Decoupling Controller for a Nonlinear System	175
<i>Xin Wang, Shaoyuan Li, Zhongjie Wang, Heng Yue</i>	
Feedback-Assisted Iterative Learning Control for Batch Polymerization Reactor	181
<i>Shuchen Li, Xinhe Xu, Ping Li</i>	
Recent Developments on Applications of Neural Networks to Power Systems Operation and Control: An Overview	188
<i>Chuangxin Guo, Quanyuan Jiang, Xiu Cao, Yijia Cao</i>	
A Novel Fermentation Control Method Based on Neural Networks	194
<i>Xuhua Yang, Zonghai Sun, Youxian Sun</i>	
Modeling Dynamic System by Recurrent Neural Network with State Variables	200
<i>Min Han, Zhiwei Shi, Wei Wang</i>	
Robust Friction Compensation for Servo System Based on LuGre Model with Uncertain Static Parameters	206
<i>Lixin Wei, Xia Wang, Hongrui Wang</i>	
System Identification Using Adjustable RBF Neural Network with Stable Learning Algorithms	212
<i>Wen Yu, Xiaou Li</i>	
A System Identification Method Based on Multi-layer Perception and Model Extraction	218
<i>Chang Hu, Li Cao</i>	
Complex Model Identification Based on RBF Neural Network	224
<i>Yibin Song, Peijin Wang, Kaili Li</i>	

Part VII Telecommunications

A Noisy Chaotic Neural Network Approach to Topological Optimization of a Communication Network with Reliability Constraints	230
<i>Lipo Wang, Haixiang Shi</i>	
Space-Time Multiuser Detection Combined with Adaptive Wavelet Networks over Multipath Channels	236
<i>Ling Wang, Licheng Jiao, Haihong Tao, Fang Liu</i>	
Optimizing Sensor Node Distribution with Genetic Algorithm in Wireless Sensor Network	242
<i>Jianli Zhao, Yingyou Wen, Ruiqiang Shang, Guangxing Wang</i>	
Fast De-hopping and Frequency Hopping Pattern (FHP) Estimation for DS/FHSS Using Neural Networks	248
<i>Tarek Elhabian, Bo Zhang, Dingrong Shao</i>	
Autoregressive and Neural Network Model Based Predictions for Downlink Beamforming	254
<i>Halil Yigit, Adnan Kavak, Metin Ertunc</i>	
Forecast and Control of Anode Shape in Electrochemical Machining Using Neural Network	262
<i>Guibing Pang, Wenji Xu, Xiaobing Zhai, Jinjin Zhou</i>	
A Hybrid Neural Network and Genetic Algorithm Approach for Multicast QoS Routing	269
<i>Daru Pan, Minghui Du, Yukun Wang, Yanbo Yuan</i>	
Performance Analysis of Recurrent Neural Networks Based Blind Adaptive Multiuser Detection in Asynchronous DS-CDMA Systems	275
<i>Ling Wang, Haihong Tao, Licheng Jiao, Fang Liu</i>	
Neural Direct Sequence Spread Spectrum Acquisition	281
<i>Tarek Elhabian, Bo Zhang, Dingrong Shao</i>	
Multi-stage Neural Networks for Channel Assignment in Cellular Radio Networks	287
<i>Hyuk-Soon Lee, Dae-Won Lee, Jaewook Lee</i>	
Experimental Spread Spectrum Communication System Based on CNN	293
<i>Jianye Zhao, Shide Guo, Daoheng Yu</i>	
Neural Congestion Control Algorithm in ATM Networks with Multiple Node	299
<i>Ruijun Zhu, Fuliang Yin, Tianshuang Qiu</i>	

Neural Compensation of Linear Distortion in Digital Communications	305
<i>Hong Zhou</i>	
On the Performance of Space-Time Block Coding Based on ICA Neural Networks	311
<i>Ju Liu, Hongji Xu, Yong Wan</i>	
ICA-Based Beam Space-Time Block Coding with Transmit Antenna Array Selection	317
<i>Hongji Xu, Ju Liu</i>	
Nonlinear Dynamic Method to Suppress Reverberation Based on RBF Neural Networks	324
<i>Bing Deng, Ran Tao</i>	

Part VIII Signal, Image, and Time Series Processing

A New Scheme for Detection and Classification of Subpixel Spectral Signatures in Multispectral Data	331
<i>Hao Zhou, Bin Wang, Liming Zhang</i>	
A Rough-Set-Based Fuzzy-Neural-Network System for Taste Signal Identification	337
<i>Yan-Xin Huang, Chun-Guang Zhou, Shu-Xue Zou, Yan Wang, Yan-Chun Liang</i>	
A Novel Signal Detection Subsystem of Radar Based on HA-CNN	344
<i>Zhangliang Xiong, Xiangquan Shi</i>	
Real-Time Detection of Signal in the Noise Based on the RBF Neural Network and Its Application	350
<i>Minfen Shen, Yuzheng Zhang, Zhancheng Li, Jinyao Yang, Patch Beadle</i>	
Classification of EEG Signals Under Different Brain Functional States Using RBF Neural Network	356
<i>Zhancheng Li, Minfen Shen, Patch Beadle</i>	
Application of a Wavelet Adaptive Filter Based on Neural Network to Minimize Distortion of the Pulsatile Spectrum	362
<i>Xiaoxia Li, Gang Li, Ling Lin, Yuliang Liu, Yan Wang, Yunfeng Zhang</i>	
Spectral Analysis and Recognition Using Multi-scale Features and Neural Networks	369
<i>YuGang Jiang, Ping Guo</i>	

A Novel Fuzzy Filter for Impulse Noise Removal	375
<i>Chang-Shing Lee, Shu-Mei Guo, Chin-Yuan Hsu</i>	
Neural Network Aided Adaptive Kalman Filter for Multi-sensors Integrated Navigation	381
<i>Lin Chai, Jianping Yuan, Qun Fang, Zhiyu Kang, Liangwei Huang</i>	
Solely Excitatory Oscillator Network for Color Image Segmentation	387
<i>Chung Lam Li, Shu Tak Lee</i>	
Image De-noising Using Cross-Validation Method with RBF Network Representation	393
<i>Ping Guo, Hongzhai Li</i>	
Ultrasonic C-scan Image Restoration Using Radial Basis Function Network	399
<i>Zongjie Cao, Huaidong Chen, Jin Xue, Yuwen Wang</i>	
Automatic Image Segmentation Based on a Simplified Pulse Coupled Neural Network	405
<i>Yingwei Bi, Tianshuang Qiu, Xiaobing Li, Ying Guo</i>	
Face Pose Estimation Based on Eigenspace Analysis and Fuzzy Clustering	411
<i>Cheng Du, Guangda Su</i>	
Chaotic Time Series Prediction Based on Local-Region Multi-steps Forecasting Model	418
<i>Minglun Cai, Feng Cai, Aiguo Shi, Bo Zhou, Yongsheng Zhang</i>	
Nonlinear Prediction Model Identification and Robust Prediction of Chaotic Time Series	424
<i>Yuexian Hou, Weidi Dai, Pilian He</i>	
Wavelet Neural Networks for Nonlinear Time Series Analysis	430
<i>Bo Zhou, Aiguo Shi, Feng Cai, Yongsheng Zhang</i>	

Part IX Biomedical Applications

Neural Networks Determining Injury by Salt Water for Distribution Lines	436
<i>Lixin Ma, Hiromi Miyajima, Noritaka Shigei, Shuma Kawabata</i>	
EEG Source Localization Using Independent Residual Analysis	442
<i>Gang Tan, Liqing Zhang</i>	
Classifying G-protein Coupled Receptors with Support Vector Machine	448
<i>Ying Huang, Yanda Li</i>	

A Novel Individual Blood Glucose Control Model Based on Mixture of Experts Neural Networks	453
<i>Wei Wang, Zheng-Zhong Bian, Lan-Feng Yan, Jing Su</i>	
Tracking the Amplitude Variation of Evoked Potential by ICA and WT	459
<i>Haiyan Ding, Datian Ye</i>	
A Novel Method for Gene Selection and Cancer Classification	465
<i>Huajun Yan, Zhang Yi</i>	
Nonnegative Matrix Factorization for EEG Signal Classification	470
<i>Weixiang Liu, Nanning Zheng, Xi Li</i>	
A Novel Clustering Analysis Based on PCA and SOMs for Gene Expression Patterns	476
<i>Hong-Qiang Wang, De-Shuang Huang, Xing-Ming Zhao, Xin Huang</i>	
Feedback Selective Visual Attention Model Based on Feature Integration Theory	482
<i>Lianwei Zhao, Siwei Luo</i>	
Realtime Monitoring of Vascular Conditions Using a Probabilistic Neural Network	488
<i>Akira Sakane, Toshio Tsuji, Yoshiyuki Tanaka, Kenji Shiba, Noboru Saeki, Masashi Kawamoto</i>	
Capturing Long-Term Dependencies for Protein Secondary Structure Prediction	494
<i>Jinmiao Chen, Narendra S. Chaudhari</i>	
A Method for Fast Estimation of Evoked Potentials Based on Independent Component Analysis	501
<i>Ting Li, Tianshuang Qiu, Xuxiu Zhang, Anqing Zhang, Wenhong Liu</i>	
Estimation of Pulmonary Elastance Based on RBF Expression	507
<i>Shunshoku Kanae, Zi-Jiang Yang, Kiyoshi Wada</i>	
Binary Input Encoding Strategy Based Neural Network for Globulin Protein Inter-residue Contacts Map Prediction	513
<i>GuangZheng Zhang, DeShuang Huang, Xin Huang</i>	
Genetic Regulatory Systems Modeled by Recurrent Neural Network	519
<i>Xianhua Dai</i>	
A New Computational Model of Biological Vision for Stereopsis	525
<i>Baoquan Song, Zongtan Zhou, Dewen Hu, Zhengzhi Wang</i>	
A Reconstruction Approach to CT with Cauchy RBFs Network	531
<i>Jianzhong Zhang, Haiyang Li</i>	

Part X Detection, Diagnostics, and Computer Security

Fault Diagnosis on Satellite Attitude Control with Dynamic Neural Network	537
<i>HanYong Hao, ZengQi Sun, Yu Zhang</i>	
A New Strategy for Fault Detection of Nonlinear Systems Based on Neural Networks	543
<i>Linglai Li, Donghua Zhou</i>	
Non-stationary Fault Diagnosis Based on Local-Wave Neural Network	549
<i>Zhen Wang, Ji Li, Zijia Ding, Yanhui Song</i>	
Hybrid Neural Network Based Gray-Box Approach to Fault Detection of Hybrid Systems	555
<i>Wenhui Wang, Dexi An, Donghua Zhou</i>	
Application of Enhanced Independent Component Analysis to Leak Detection in Transport Pipelines	561
<i>Zhengwei Zhang, Hao Ye, Rong Hu</i>	
Internet-Based Remote Monitoring and Fault Diagnosis System	567
<i>Xing Wu, Jin Chen, Ruqiang Li, Fucai Li</i>	
Rough Sets and Partially-Linearized Neural Network for Structural Fault Diagnosis of Rotating Machinery	574
<i>Peng Chen, Xinying Liang, Takayoshi Yamamoto</i>	
Transient Stability Assessment Using Radial Basis Function Networks	581
<i>Yutian Liu, Xiaodong Chu, Yuanyuan Sun, Li Li</i>	
An Optimized Shunt Hybrid Power Quality Conditioner Based on an Adaptive Neural Network for Power Quality Improvement in Power Distribution Network	587
<i>Ming Zhang, Hui Sun, Jiyang Zou, Hang Su</i>	
Cyclic Statistics Based Neural Network for Early Fault Diagnosis of Rolling Element Bearings	595
<i>Fuchang Zhou, Jin Chen, Jun He, Guo Bi, Guicai Zhang, Fucai Li</i>	
Application of BP Neural Network for the Abnormity Monitoring in Slab Continuous Casting	601
<i>Xudong Wang, Man Yao, Xingfu Chen</i>	
A TVAR Parametric Model Applying for Detecting Anti-electric-Corona Discharge	607
<i>Zhe Chen, Hongyu Wang, Tianshuang Qiu</i>	

The Study on Crack Diagnosis Based on Fuzzy Neural Networks Using Different Indexes	613
<i>Jingfen Zhang, Guang Meng, Deyou Zhao</i>	
Blind Fault Diagnosis Algorithm for Integrated Circuit Based on the CPN Neural Networks	619
<i>Daqi Zhu, Yongqing Yang, Wuzhao Li</i>	
A Chaotic-Neural-Network-Based Encryption Algorithm for JPEG2000 Encoded Images	627
<i>Shiguo Lian, Guanrong Chen, Albert Cheung, Zhiquan Wang</i>	
A Combined Hash and Encryption Scheme by Chaotic Neural Network	633
<i>Di Xiao, Xiaofeng Liao</i>	
A Novel Symmetric Cryptography Based on Chaotic Signal Generator and a Clipped Neural Network	639
<i>Tsing Zhou, Xiaofeng Liao, Yong Chen</i>	
A Neural Network Based Blind Watermarking Scheme for Digital Images	645
<i>Guoping Tang, Xiaofeng Liao</i>	
Color Image Watermarking Based on Neural Networks	651
<i>Wei Lu, Hongtao Lu, Ruiming Shen</i>	
A Novel Intrusion Detection Method Based on Principle Component Analysis in Computer Security	657
<i>Wei Wang, Xiaohong Guan, Xiangliang Zhang</i>	
A Novel Wavelet Image Watermarking Scheme Combined with Chaos Sequence and Neural Network	663
<i>Jian Zhao, Mingquan Zhou, Hongmei Xie, Jinye Peng, Xin Zhou</i>	
Quantum Neural Network for Image Watermarking	669
<i>Shiyan Hu</i>	
An NN-Based Malicious Executables Detection Algorithm Based on Immune Principles	675
<i>Zhenhe Guo, Zhengkai Liu, Ying Tan</i>	
The Algorithm for Detecting Hiding Information Based on SVM	681
<i>JiFeng Huang, JiaJun Lin, XiaoFu He, Meng Dai</i>	
An E-mail Filtering Approach Using Neural Network	688
<i>Yukun Cao, Xiaofeng Liao, Yunfeng Li</i>	

Part XI Other Applications

Topography-Enhanced BMU Search in Self-Organizing Maps	695
<i>James S. Kirk, Jacek M. Zurada</i>	
Nonlinear Optimal Estimation for Neural Networks Data Fusion	701
<i>Ye Ma, Xiao Tong Wang, Bo Li, JianGuo Fu</i>	
Improvement of Data Visualization Based on SOM	707
<i>Chao Shao, Houkuan Huang</i>	
Research on Neural Network Method in GPS Data Transformation	713
<i>Min Han, Xue Tian, Shiguo Xu</i>	
Dynamic File Allocation in Storage Area Networks with Neural Network Prediction	719
<i>Weitao Sun, Jiwu Shu, Weimin Zheng</i>	
Competitive Algorithms for Online Leasing Problem in Probabilistic Environments	725
<i>Yinfeng Xu, Weijun Xu</i>	
Wavelet Network for Nonlinear Regression Using Probabilistic Framework	731
<i>Shu-Fai Wong, Kwan-Yee Kenneth Wong</i>	
A Neural Network Approach for Indirect Shape from Shading	737
<i>Ping Hao, Dongming Guo, Renke Kang</i>	
A Hybrid Radial Basis Function Neural Network for Dimensional Error Prediction in End Milling	743
<i>Xiaoli Li, Xinping Guan, Yan Li</i>	
Bayesian Neural Networks for Life Modeling and Prediction of Dynamically Tuned Gyroscopes	749
<i>Chunling Fan, Feng Gao, Zhihua Jin</i>	
Furnace Temperature Modeling for Continuous Annealing Process Based on Generalized Growing and Pruning RBF Neural Network	755
<i>Qing Chen, Shaoyuan Li, Yugeng Xi, Guangbin Huang</i>	
A Learning-Based Contact Model in Belt-Grinding Processes	761
<i>Xiang Zhang, Bernd Kuhlenkötter, Klaus Kneupner</i>	
Application of General Regression Neural Network to Vibration Trend Prediction of Rotating Machinery	767
<i>Zhipeng Feng, Fulei Chu, Xigeng Song</i>	
A Novel Nonlinear Projection to Latent Structures Algorithm	773
<i>Shi Jian Zhao, Yong Mao Xu, Jie Zhang</i>	

Inversing Reinforced Concrete Beams Flexural Load Rating Using ANN and GA Hybrid Algorithm	779
<i>Zeying Yang, Chengkui Huang, Jianbo Qu</i>	
Determining of the Delay Time for a Heating Ventilating and Air-Conditioning Plant Using Two Weighted Neural Network Approach	786
<i>Mengdi Hu, Wenming Cao, Shoujue Wang</i>	
Intelligent Forecast Procedures for Slope Stability with Evolutionary Artificial Neural Network	792
<i>Shouju Li, Yingxi Liu</i>	
Structural Reliability Analysis via Global Response Surface Method of BP Neural Network	799
<i>Jinsong Gui, Hequan Sun, Haigui Kang</i>	
Modeling Temperature Drift of FOG by Improved BP Algorithm and by Gauss-Newton Algorithm	805
<i>Xiyuan Chen</i>	
A Novel Chaotic Neural Network for Automatic Material Ratio System	813
<i>Lidan Wang, Shukai Duan</i>	
Finite Element Analysis of Structures Based on Linear Saturated System Model	820
<i>Hai-Bin Li, Hong-Zhong Huang, Ming-Yang Zhao</i>	
Neural Network Based Fatigue Cracks Evolution	826
<i>Chunsheng Liu, Weidong Wu, Daoheng Sun</i>	
Density Prediction of Selective Laser Sintering Parts Based on Artificial Neural Network	832
<i>Xianfeng Shen, Jin Yao, Yang Wang, Jialin Yang</i>	
Structure Optimization of Pneumatic Tire Using an Artificial Neural Network . . .	841
<i>XuChun Ren, ZhenHan Yao</i>	
A Multiple RBF NN Modeling Approach to BOF Endpoint Estimation in Steelmaking Process	848
<i>Xin Wang, Shaoyuan Li, Zhongjie Wang, Jun Tao, Jinxin Liu</i>	
Application of Neural Network on Wave Impact Force Prediction	854
<i>Hongyu Zhang, Yongxue Wang, Bing Ren</i>	
RBF Neural Networks-Based Software Sensor for Aluminum Powder Granularity Distribution Measurement	860
<i>Yonghui Zhang, Cheng Shao, Qinghui Wu</i>	

A Technological Parameter Optimization Approach in Crude Oil Distillation Process Based on Neural Network	866
<i>Hao Tang, Quanyi Fan, Bowen Xu, Jianming Wen</i>	
A Neural Network Modeling Method for Batch Process	874
<i>Yi Liu, XianHui Yang, Jie Zhang</i>	
Modelling the Supercritical Fluid Extraction of Lycopene from Tomato Paste Waste Using Neuro-Fuzzy Approaches	880
<i>Simon X. Yang, Weiren Shi, Jin Zeng</i>	
Detection of Weak Targets with Wavelet and Neural Network	886
<i>Changwen Qu, You He, Feng Su, Yong Huang</i>	
An Artificial Olfactory System Based on Gas Sensor Array and Back-Propagation Neural Network	892
<i>Huilin Tai, Guangzhong Xie, Yadong Jiang</i>	
Consumer Oriented Design of Product Forms	898
<i>Yang-Cheng Lin, Hsin-Hsi Lai, Chung-Hsing Yeh</i>	
An Intelligent Simulation Method Based on Artificial Neural Network for Container Yard Operation	904
<i>Chun Jin, Xinlu Liu, Peng Gao</i>	
A Freeway Traffic Incident Detection Algorithm Based on Neural Networks	912
<i>Xuhua Yang, Zonghai Sun, Youxian Sun</i>	
Radial Basis Function Network for Chaos Series Prediction	920
<i>Wei Chi, Bo Zhou, Aiguo Shi, Feng Cai, Yongsheng Zhang</i>	
Feature Extraction and Identification of Underground Nuclear Explosion and Natural Earthquake Based on FM ^m let Transform and BP Neural Network	925
<i>Xihai Li, Ke Zhao, Daizhi Liu, Bin Zhang</i>	
A Boosting-Based Framework for Self-Similar and Non-linear Internet Traffic Prediction	931
<i>Hanghang Tong, Chongrong Li, Jingrui He</i>	
Traffic Flow Forecasting Based on Parallel Neural Network	937
<i>Guozhen Tan, Wenjiang Yuan</i>	
A High Precision Prediction Method by Using Combination of ELMAN and SOM Neural Networks	943
<i>Jie Wang, Dongwei Yan</i>	

Short-Term Traffic Flow Forecasting Using Expanded Bayesian Network for Incomplete Data	950
<i>Changshui Zhang, Shiliang Sun, Guoqiang Yu</i>	
Highway Traffic Flow Model Using FCM-RBF Neural Network	956
<i>Jian-Mei Xiao, Xi-Huai Wang</i>	
Earthquake Prediction by RBF Neural Network Ensemble	962
<i>Yue Liu, Yuan Wang, Yuan Li, Bofeng Zhang, Gengfeng Wu</i>	
Rainfall-Runoff Correlation with Particle Swarm Optimization Algorithm	970
<i>Kwokwing Chau</i>	
A Study of Portfolio Investment Decision Method Based on Neural Network	976
<i>Yongqing Yang, Jinde Cao, Daqi Zhu</i>	
Portfolio Optimization for Multi-stage Capital Investment with Neural Networks	982
<i>Yanglan Zhang, Yu Hua</i>	
Efficient Option Pricing via a Globally Regularized Neural Network	988
<i>Hyung-Jun Choi, Hyo-Seok Lee, Gyu-Sik Han, Jaewook Lee</i>	
Effectiveness of Neural Networks for Prediction of Corporate Financial Distress in China	994
<i>Ji-Gang Xie, Jing Wang, Zheng-Ding Qiu</i>	
A Neural Network Model on Solving Multiobjective Conditional Value-at-Risk	1000
<i>Min Jiang, Zhiqing Meng, Qiying Hu</i>	
DSP Structure Optimizations – A Multirate Signal Flow Graph Approach	1007
<i>Ronggang Qi, Zifeng Li, Qing Ma</i>	
Author Index	1013