

# **2012 International Conference on Machine Learning and Cybernetics**

## **(ICMLC 2012)**

**Xian, Shaanxi, China  
15 – 17 July 2012**

**Volume 1  
Pages 1-420**



**IEEE Catalog Number: CFP12523-PRT  
ISBN: 978-1-4673-1484-8**

# Contents

<b>Greetings from the General Chairs .....</b>	I
<b>Greetings from the Program Committee Chairs .....</b>	II
<b>Organizing Committee.....</b>	IV
<b>Organizing Committee of IWWIP.....</b>	VI
<b>Program Committee.....</b>	VII
<b>Program Committee of IWWIP.....</b>	VIII
<b>List of Reviewers.....</b>	IX
<b>List of Reviewers for IWWIP.....</b>	XI

## Contributed Papers

### Data Fusion and Ensemble Methods

<b>PROFIT AND LOSS CALCULATION MODEL OF DATA SYNCHRONIZATION BASED ON MARKOV CHAIN</b>	
XIAO YU, YOU-DONG ZUO .....	1
<b>AN EXTENSION OF THE Q DIVERSITY METRIC FROM SINGLE-LABEL TO MULTI-LABEL AND MULTI-RANKING MULTIPLE CLASSIFIER SYSTEMS FOR PATTERN CLASSIFICATION</b>	
FILIPPO SCIARRONE .....	6
<b>A NOUN-PHRASE CHUNKING MODEL BASED ON SBCB ENSEMBLE LEARNING ALGORITHM</b>	
LING ZHU, LIDIA S. CHAO, DEREK F. WONG, XIAO-DONG ZENG .....	11
<b>REGION DUPLICATION BLIND DETECTION BASED ON MULTIPLE FEA-TURE COMBINATION</b>	
ZHEN-LONG DU, XIAO-LI LI, LI-XIN JIAO, KANGKANG SHEN .....	17
<b>DATA ASSIMILATION BY COUPLING UNCERTAIN SUPPORT VECTOR MACHINE WITH ENSEMBLE KALMAN FILTER</b>	
XIAO-LI LI, ZHEN-LONG DU, LI-XIN JIAO, KANGKANG SHEN .....	22
<b>A NOVEL FAULT DIAGNOSIS SYSTEM FOR AIRCRAFT BASED ON ADABOOST AND FIVE SUBSYSTEMS WITH DIFFERENT PATTERN RECOGNITION METHODS</b>	
ZE-FENG WANG, JEAN-LUC ZARADER, SYLVAIN ARGENTIERI.....	28
<b>FAULT DIAGNOSIS BASED ON PRUNED ENSEMBLE</b>	

JIAN SUN, LEI-JUN LI, QING-HUA HU .....	35
<b>WEIGHTED MAJORITY AND FUZZY INTEGRAL AUTOMATED PLANNER COMBINATION IN PROBABILISTIC PLANNING</b>	
ZHI-HUA JIANG .....	41
<b>AN IMPROVED LINK ANALYSIS BASED CLUSTERING ENSEMBLE METHOD</b>	
LI-JUAN WANG, ZHI-FENG HAO .....	47
<b>RANDOM FOREST BASED ENSEMBLE SYSTEM FOR SHORT TERM LOAD FORECASTING</b>	
YING-YING CHENG, PATRICK P.K. CHAN, ZHI-WEI QIU .....	52
<b>BOOSTING MULTIPLE HASH TABLES TO SEARCH</b>	
JIN-CHENG LI .....	57

## Data Mining and Knowledge Discovery

<b>THE AUTOMATIC DIAGNOSIS SYSTEM OF BREAST CANCER BASED ON THE IMPROVED APRIORI ALGORITHM</b>	
WEN-JING ZHANG, DONG-LAI MA, BIN DONG .....	63
<b>THE RESEARCH AND APPLICATION OF THE CHINESE SPORTS INFORMATION EXTRACTION</b>	
SU-XIANG ZHANG, LUO-MING MENG, GUO-YANG GAO, YING QIN .....	67
<b>APPLYING A MULTITASK FEATURE SPARSITY METHOD FOR THE CLASSIFICATION OF SEMANTIC RELATIONS BETWEEN NOMINALS</b>	
GUOQING CHAO, SHILIANG SUN .....	72
<b>MINING TEMPERATURE PROFILE DATA FOR SHIRE-LEVEL CROP YIELD PREDICTION</b>	
YUNOUS VAGH, JITIAN XIAO .....	77
<b>ANALYZING THE INFLUENCE OF PUBLIC EVENTS VIA OPEN MICROBLOGGING APIs</b>	
XIONGZONG LI, YI XIE, CUIHUA LI, XILONG SUN .....	84
<b>MINING DATA ASSOCIATION BASED ON A REVISED FP-GROWTH ALGORITHM</b>	
LEI WANG, XING-JUAN FAN, XING-LONG LIU, HUAN ZHAO .....	91
<b>AN EFFICIENT ALGORITHM FOR MINING COMPLETE SHARE-FREQUENT ITEMSETS USING BITTABLE AND HEURISTICS</b>	
CHAYANAN NAWAPORNANAN, VEERA BOONJING .....	96
<b>MINING LATENT TAG GROUP BASED ON TAG DEPENDENCY RELATION FOR RECOMMENDATION IN COLLABORATIVE TAGGING SYSTEMS</b>	
YU LIU, YI CAI, GUANG-YI ZHANG, HONG-KE ZHAO, JUN-TING CHEN, HUA-QING MIN .....	102
<b>MULTI-PROTOTYPE BASED SEMANTIC SIMILARITY OF CONCEPTS IN ONTOLOGY</b>	
JIAN CHEN, YI CAI, YU LIU, JINGKAI LI, XUEMIAO XU, HUAQING MIN .....	107
<b>INSTANCE SELECTION BASED ON SUPERVISED CLUSTERING</b>	
JUN-HAI ZHAI, HONG-YU XU, SU-FANG ZHANG, NA LI, TA LI .....	112
<b>AN ONTOLOGY BASED SEMANTIC HETEROGENEITY MEASUREMENT FRAMEWORK FOR OPTIMIZATION IN DISTRIBUTED DATA MINING</b>	
BIN LIU, SHU-GUI CAO, DONG-FANG CAO, QING-CHUN LI, HAI-TAO LIU, SHAO-NAN SHI .....	118

## Feature Selection and Manifold Learning

<b>REGULARIZED MAX-MIN DISTANCE ANALYSIS FOR DIMENSION REDUCTION USING THE FISHER CRITERION</b>	
GUO-WAN SHAO .....	124
<b>A TYPE OF ATTRIBUTE REDUCTION OF FORMAL CONTEXTS</b>	
TONG-JUN LI .....	130
<b>AN ALGORITHM FOR FINGERPRINT BASIC MINUTIAE FEATURE MATCHING</b>	
XI-FENG TONG, PENG-FEI LI, YU-XIANG HAN .....	136
<b>FEATURE SELECTION FOR CLASSIFICATION OF BGP ANOMALIES USING BAYESIAN MODELS</b>	

NABIL AL ROUSAN, SOROUSH HAERI, LJILJANA TRAJKOVIC'	140
<b>FRACTAL DIMENSION FEATURE FOR DISTINGUISHING BETWEEN OVERLAPPED SPEECH AND SINGLE-SPEAKER SPEECH</b>	
WEI LI, QIAN-HUA HE, YAN-XIONG LI, XUE-YUAN ZHANG, XIAO-HUI FENG	148
<b>EQUIVALENCE OF MSE AND MAXENT AS OBJECTIVE FUNCTION OF PCA</b>	
HAI-FENG LI, HONG-BAO LIU, NING-HUA MA	152
<b>FEATURE SELECTION BASED ON EXTREME LEARNING MACHINE</b>	
MENG-YAO ZHAI, RUI-HUA YU, SU-FANG ZHANG, JUN-HAI ZHAI	157
<b>FEATURE SELECTION FOR COST-SENSITIVE LEARNING USING RBFNN</b>	
LI LIN	163
<b>MUTIVARIABLE MUTUAL INFORMATION BASED FEATURE SELECTION FOR ELECTRICITY PRICE FORECASTING</b>	
ZHI-WEI QIU	168

## Fuzzy Set Theories and Methods

<b>FUZZY MINIMAL SOLUTION OF POSITIVE FULLY FUZZY MATRIX EQUATIONS</b>	
DE-QUAN SHANG, XIAO-BIN GUO	174
<b>APPLICATION OF T-S FUZZY MODELING METHOD IN THE BED TEMPERATURE CONTROL OF CIRCULATING FLUIDIZED BED BOILER</b>	
QING-QING YAN, CHAO-YING LIU, XUE-LING SONG, ZHE-YING SONG, TENG-FEI LI	179
<b>PROPERTIES AND AXIOMATIZATION OF FUZZY ROUGH SETS BASED ON FUZZY COVERING</b>	
MING-FEN WU, HAO-HAN HAN, YAN-FEI SI	184
<b>STUDY ON FUZZY ADAPTIVE VARIABLE STRUCTURE ATTITUDE CONTROLLER DESIGN</b>	
WEN-LONG SONG, CHUN-MEI LIU, LIANG-KUAN ZHU	190
<b>VARIABLE PRECISION ROUGH FUZZY SET MODEL BASED ON GENERAL RELATIONS</b>	
ERIC C.C. TSANG, WEIMIN MA, BINGZHEN SUN	195
<b>AN ATTRIBUTE REDUCTION METHOD BASED ON CORE SAMPLES SET</b>	
ERIC C.C. TSANG, CHEN-XIA JIN, DE-GANG CHEN, FA-CHAO LI	200
<b>ATTRIBUTE REDUCTION BASED ON INTERVAL VALUED FUZZY GRANULES</b>	
ERIC C.C. TSANG, S.Y. ZHAO	206
<b>BELIEF AND PLAUSIBILITY REDUCTS IN INCOMPLETE INFORMATION SYSTEMS WITH FUZZY DECISION</b>	
JIMING HU, WEI-ZHI WU	212
<b>FUZZY MEASURE-BASED FUZZY RULE INTERPOLATION BASED ON PSO-BASED FUZZY INTEGRAL-LEARNING TECHNIQUES</b>	
GUO-FANG ZHANG, LI-HUI HE, RUI-HUA YU, JIA-CHENG HE	219
<b>ON CHARACTERIZATION OF FUZZY ROUGH SETS BASED ON PSEUDO-OPERATIONS</b>	
ZENG-TAI GONG, ZHAN-HONG SHI, YA-BIN SHAO	226
<b>A NOVEL SIMILARITY MEASURE OF INTUITIONISTIC FUZZY SETS INDUCED BY TRIANGULAR NORM</b>	
ZHAN-HONG SHI, ZENG-TAI GONG, YA-BIN SHAO	233
<b>THE CONVERGENCE THEOREMS OF THE MCSHANE-STIELTJES INTEGRAL FOR FUZZY-NUMBER-VALUED FUNCTIONS</b>	
YA-BIN SHAO, ZENG-TAI GONG	238
<b>A RANKING METHOD OF THE INTERVAL-VALUED INTUITIONISTIC FUZZY NUMBERS AND ITS APPLICATION IN THE GROUP DECISION MAKING</b>	
YAN-ZONG YAN, XIAO-HONG YUE, XIAO-XIA ZHANG	243
<b>AXIOMATIC APPROACHES OF FUZZY CONCEPT OPERATORS</b>	
XIAO-XUE SONG, XIA WANG, WEN-XIU ZHANG	249
<b>INTERVAL VALUED FUZZY ROUGH CLASSIFIER AND ITS APPLICATION ON PRIVACY PROTECTION</b>	

SU-YUN ZHAO, SI LIN .....	255
<b>MULTI-CRITERIA SORTING METHOD BASED ON AHP AND VARIABLE PRECISION ROUGH SET</b>	
YAN LI, ZHEN HAN, QIANG HE .....	261
<b>AN ANALYSIS OF SOLUTIONS FOR FUZZY MULTI-OBJECTIVE LINEAR PROGRAMMING PROBLEM</b>	
HUA ZUO, GUO-LI ZHANG .....	267
<b>ATTRIBUTE REDUCTION BASED ON THE PRINCIPLE OF MAXIMAL DEPENDENCY AND MINIMAL MUTUAL INFORMATION</b>	
JUN-HAI ZHAI, LI-YAN WAN, MENG-YAO ZHAI .....	272
<b>A NEW METHOD OF ATTRIBUTE REDUCTION FOR COVERING ROUGH SETS</b>	
WAN-LU LI, DE-GANG CHEN, YAN-YAN YANG .....	277
<b>FUZZY ROUGH SETS BASED UNCERTAINTY MEASURING FOR STREAM BASED ACTIVE LEARNING</b>	
RAN WANG, SAM KWONG, DE-GANG CHEN, QIANG HE .....	282
<b>APPLYING FUZZY INTEGRAL TO PERFORMANCE EVALUATION IN REAL TIME STRATEGY GAME</b>	
Y.J. LI, PETER H. F. NG, H. B. WANG, S. C. K. SHIU, Y. LI .....	289
<b>ATTRIBUTE REDUCTION OF DECISION TABLE BASED ON SIMILAR RELATION</b>	
CHANG-ZHONG WANG, XIN-HUA CUI, WEN-YING BAO, QIANG HE .....	296
<b>A METHOD OF ASCERTAINING FUZZY COVERING BASED ON A FAMILY OF FUZZY CONCEPTS</b>	
ZHAN-JING WANG, JIAO-YING WANG, FA-CHAO LI .....	302
<b>EVALUATION OF ENTREPRENEURIAL ENVIRONMENT BASED ON FUZZY COMPREHENSIVE EVALUATION METHOD</b>	
JING-YUAN HAN, YAN-BO YANG, YUN-HE ZHAO .....	305

## Neural Networks and Support Vector Machines

<b>A NEW SMOOTH SUPPORT VECTOR MACHINE FOR REGRESSION</b>	
JIN-DONG SHEN .....	310
<b>GPS GDOP APPROXIMATION USING SUPPORT VECTOR REGRESSION ALGORITHM WITH PARAMETRIC INSENSITIVE MODEL</b>	
PEI-YI HAO, CHAO-YI WU .....	315
<b>PERFORMANCE TEST OF PARAMETERS FOR SPEAKER RECOGNITION SYSTEM BASED ON SVM-VQ</b>	
HAI-YAN YANG, XIN-XING JING .....	321
<b>FUZZY NEURAL NETWORK BASED DYNAMIC PATH PLANNING</b>	
MIN JIANG, YANG YU, XIANLI LIU, FAN ZHANG, QINGYANG HONG .....	326
<b>THE APPLICATION RESEARCH OF BOOK INTELLIGENT WEEDING BASED ON NEURAL NETWORK</b>	
YU-JING SHI, XUEJUN WANG, SHASHA SONG .....	331
<b>ACTIVE LEARNING FOR PERSON RE-IDENTIFICATION</b>	
JIN-PENG XIANG .....	336
<b>EMPIRICAL ESTIMATION OF FUNCTIONAL RELATIONSHIPS BETWEEN Q VALUE OF THE L-GEM AND TRAINING DATA USING GENETIC PROGRAMMING</b>	
ZHI-QIAN HUANG, WING W.Y. NG .....	341
<b>COST-SENSITIVE STEGANALYSIS WITH STOCHASTIC SENSITIVITY AND COST SENSITIVE TRAINING ERROR</b>	
ZHI-MIN HE .....	349
<b>FORECASTING REGIONAL TALENT DEMAND BASED ON SUPPORT VECTOR MACHINE</b>	
XING SU, ZHENG-RAN ZHAN, CHUN-PING LI .....	355
<b>DISCRETE WAVELET TRANSFORM AND PROBABILISTIC NEURAL NETWORK ALGORITHM FOR CLASSIFICATION OF FAULT TYPE IN UNDERGROUND CABLE</b>	
A NGAOPITAKKUL, N SUTTISINTHONG .....	360
<b>CMAC NEURAL NETWORK AND SINGLE NEURON PID COMPOSITE CONTROL IN THE APPLICATION OF TEMPERATURE CONTROL</b>	

YANG XUE, SHA WANG .....	367
<b>LEARNING THE STRUCTURE OF DYNAMIC BAYESIAN NETWORK WITH DOMAIN KNOWLEDGE</b>	
JUAN CHEN, HAIYANG JIA, YUXIAO HUANG, DAYOU LIU .....	372
<b>ITERATIVE BILINEAR SIMILARITY MEASURE LEARNING FOR CBIR VIA A MINIMIZATION OF A LOCAL SENSITIVITY</b>	
SHAO-HUA YIN, JIN-CHENG LI .....	376
<b>MODEL SELECTION OF RBF KERNEL FOR C-SVM BASED ON GENETIC ALGORITHM AND MULTITHREADING</b>	
GUO-YOU SHI, SHUANG LIU .....	382
<b>A MULTIPLE SVR MODELING OF HOT ROLLING PROCESS COMBINED WITH KERNEL CLUSTERING AND GREY RELATIONAL GRADE</b>	
LING WANG, DONG-MEI FU, WEI-DONG YANG .....	387
<b>STOCK INVESTMENT DECISION SUPPORT USING AN ENSEMBLE OF L-GEM BASED ON RBFNN DIVERSE TRAINED FROM DIFFERENT YEARS</b>	
XUE-LING LIANG, WING W.Y. NG .....	394
<b>COLLABORATIVE FILTERING RECOMMENDER SYSTEM IN ADVERSARIAL ENVIRONMENT</b>	
HUI YU, FEI ZHANG .....	400
<b>SQL INJECTION ATTACKS DETECTION IN ADVERSARIAL ENVIRONMENTS BY K-CENTERS</b>	
XI-RONG WU, PATRICK P.K. CHAN .....	406
<b>AWEIGHTED VOTING METHOD USING MINIMUM SQUARE ERROR BASED ON EXTREME LEARNING MACHINE</b>	
JING-JING CAO, SAM KWONG, RAN WANG, KE LI .....	411
<b>RELIABLE FACE RECOGNITION BY RANDOM SUBSPACE SUPPORT VECTOR MACHINE ENSEMBLE</b>	
BAILING ZHANG .....	415

# **2012 International Conference on Machine Learning and Cybernetics**

  

## **(ICMLC 2012)**

**Xian, Shaanxi, China  
15 – 17 July 2012**

**Volume 2  
Pages 421-815**



**IEEE Catalog Number: CFP12523-PRT  
ISBN: 978-1-4673-1484-8**

# Contents

<b>Greetings from the General Chairs .....</b>	I
<b>Greetings from the Program Committee Chairs .....</b>	II
<b>Organizing Committee.....</b>	IV
<b>Organizing Committee of IWWIP.....</b>	VI
<b>Program Committee.....</b>	VII
<b>Program Committee of IWWIP.....</b>	VIII
<b>List of Reviewers.....</b>	IX
<b>List of Reviewers for IWWIP.....</b>	XI

## Contributed Papers

### Neural Networks and Support Vector Machines

<b>ACTIVE SHAPE MODEL FOR FACIAL FEATURE POINTS LOCATION</b> LI ZHAO .....	421
<b>NNC+SVM: AN EMPIRICAL STUDY FOR FAST CLASSIFICATION</b> JIE JI, QIANG-FU ZHAO.....	427
<b>SOFT SENSOR FOR COAL MILL PRIMARY AIR FLOW BASED ON LSSVR</b> YAO-QUAN YANG, SHOU-HUI WANG, YUN-FANG LIN .....	434
<b>DYNAMIC MATRIX CONTROL BASED ON NEURAL NETWORKS ERROR COMPENSATION</b> XIU-ZHANG JIN, SHENG-PING ZHAO, LIN LI .....	440
<b>ELMAN NEURAL NETWORK IN THE SOFT SENSOR MODELLING FOR THE UNBURNED CARBON IN FLY ASH FROM UTILITY BOILERS</b> XIU-ZHANG JIN, LIN LI.....	444
<b>FUZZY SUPPORT VECTOR MACHINE BASED ON NON-EQUILIBRIUM DATA</b> DA-ZENG TIAN, GUI-BING PENG, MING-HU HA .....	448
<b>THE APPLICATION OF RBF NEURAL NETWORK IN THE COMPLEX INDUSTRY PROCESS</b> YONG-WEI LI, TAO YUAN, JING-JIN HAN, JING-FEI ZHU .....	454
<b>SPARSE LS-SVM TWO-STEPS MODEL SELECTION METHOD</b> BINBIN SUN, DANIEL S. YEUNG .....	460
<b>COMPARATIVE STUDY OF FINANCIAL DISTRESS PREDICTION VIA OPTIMIZED SVM</b> CHUN-MEI LIU .....	466

<b>SVM-BASED PREDICTION OF PROTEIN-PROTEIN INTERACTIONS OF GLUCOSINOLATE BIOSYNTHESIS</b>	
YAN-SHUO CHU, YA-QIU LIU, QU WU .....	471
<b>SVR-GA-BASED ADAPTIVE POWER COAL RATE MODELING AND OPTIMIZATION FOR LARGE COAL-FIRED POWER UNITS</b>	
NING-LING WANG, TING ZHANG, YONG-PING YANG, DE-GANG CHEN .....	477
<b>IMBALANCED EXTREME SUPPORT VECTOR MACHINE</b>	
XU ZHOU, SHU-XIA LU, LI-SHA HU, MENG ZHANG .....	483
<b>ACTIVE LEARNING FOR IMBALANCE PROBLEM USING L-GEM OF RBFNN</b>	
JUNJIE HU .....	490

## Procedural Learning Methods

<b>AN INCREMENTAL LEARNING ALGORITHM FOR AUTONOMOUS MENTAL DEVELOPMENT OF ROBOTS</b>	
CHANG-AN YI, HUA-QING MIN, RONG-HUA LUO, XIAO-WEN SHEN, ZHI-PENG ZHONG, MING-JIE LIANG .....	496
<b>META-PREDICTION OF PHOSPHORYLATION SITES WITH MULTIPLICATIVE WEIGHTED UPDATE ALGORITHMS</b>	
ZIH-YIN CHEN, WEI-FU LU .....	501
<b>APPLICATION OF PROPOSITIONAL SATISFIABILITY TO SPECIAL CASES OF COOPERATIVE PATH-PLANNING</b>	
PAVEL SURYNEK.....	507
<b>CASE-BASED MULTI-TASK PATHFINDING ALGORITHM</b>	
YAN LI, LAN-MING SU, QIANG HE .....	513

## Intelligent Systems

<b>INTELLIGENT VVOIP IMPLEMENTATION IN UEC CLOUD COMPUTING</b>	
BAO-RONG CHANG, HSIU-FEN TSAI, ZIH-YAO LIN, CHI-MING CHEN, CHIEN-FENG HUANG .....	519
<b>ADAPTIVE ESTIMATION OVER DISTRIBUTED SENSOR NETWORKS WITH A HYBRID ALGORITHM</b>	
ELMIRA MOHYEDINBONAB, OMID GHASEMI, MO JAMSHIDI, YU-FANG JIN .....	525
<b>A SECURE ACCESS CONTROL PROTOCOL OF RFID TAGS BASED ON EPC C1G2</b>	
ZHONG-WEN LI, CHENG-BIN WU, YI XIE, ZHENG-WEI JING .....	532
<b>A NEW PRUNING ALGORITHM FOR GAME TREE IN CHINESE CHESS COMPUTER GAME</b>	
HAI-TAO LIU, BAO-EN GUO.....	538
<b>A TIME-BOUNDED HIERARCHICAL ACCESS CONTROL FOR MULTICAST SYSTEMS</b>	
VICTOR R.L. SHEN, WEI CHIEH HUANG, TZER LONG CHEN .....	543
<b>THE ANALYSIS INTERFACE OF DYNAMIC NETWORK ANALYSIS FOR NETWORKED MILITARY ORGANIZATIONS</b>	
JINCAI HUANG, QING CHENG, GUANGQUAN CHENG, ZHONG LIU, GUOLI YANG .....	549
<b>A MODIFIED SHUTTLED FROG LEAPING ALGORITHM FOR SOLVING NODES POSITION IN WIRELESS SENSOR NETWORK</b>	
CHEN FENG, LING-HUA ZHANG .....	555
<b>A TWO-STEP HYBRID APPROACH FOR VOICEPRINT-BIOMETRIC TEMPLATE PROTECTION</b>	
HUA-HONG ZHU, QIAN-HUA HE, YAN-XIONG LI .....	560
<b>SOLVING GAME WITH INTERVAL-VALUED UTILITIES</b>	
SHENG-MIN CUI, LI-HUA ZHOU, QI-YU FANG, MING YANG .....	566
<b>DESIGNING A HIGH-PERFORMANCE CHINESE CHESS COMPUTER PLAYER FOR MIDDLE GAME POSITION</b>	
WAN-GUO YU .....	571
<b>A COOPERATIVE MAC PROTOCOL WITH NEIGHBOR NODES INFORMATION FOR AD HOC NETWORKS</b>	
ZHENG-WEI JING, YI XIE, PENGFEI YUAN, XI-JIAN CHEN .....	578
<b>IMPLEMENTING CHORD WITH DECLARATIVE NETWORKING LANGUAGE</b>	
CHENG-ZHANG PENG, ZE-JUN JIANG, XIAO-BIN CAI, ZHI-KE ZHANG .....	586
<b>AN RFID-MIDDLEWARE-BASED RFID ROUTER ARCHITECTURE</b>	
GENG-JIA DING, FA-GUI LIU, YONG-XIONG RUAN, YUE-DONG LIN .....	591
<b>FORMALIZED SECURITY MODEL OF IDENTITY-BASED MULTI-PROXY SIGNATURE</b>	
LIANG HUO, LIU YANG, GUO-CHUN ZHANG .....	596
<b>ON INTRUSION DETECTION MATCHING ALGORITHM FROM THE PERSPECTIVE OF MULTI-AGENT</b>	
JING-HONG WANG, YU-FENG DONG, HAI-FENG LIU .....	601
<b>THE ANALYSIS OF COAL PORT ABNORMAL PHENOMENON ACTIVITY NETWORK UNDER GENERALIZED</b>	

**PRECEDENCE RELATIONS**

YUAN-SHENG HUANG, SHUANG LIU, LI-XIA TIAN .....	607
<b>SYNCHRONIZATION OF DISCRETE-TIME FRACTIONAL-ORDER SYSTEMS FOR CHAOTIC CONTROLLER DESIGN</b>	
HAI-PING LI .....	612
<b>THE RESEARCH OF PRODUCTION ENGINEERING EQUIPMENT SIMULATION SYSTEM</b>	
HUI LI, YUN-MIN ZHAO, WEI TONG .....	615

**Service Sciences**

<b>NEW ROBUST EXPONENTIAL STABILITY OF COMPLEX NEUTRAL SYSTEM WITH MIXED TIME-VARYING DELAYS AND NONLINEAR PERTURBATIONS</b>	
JI-QING QIU, YI LI, LONG ZHAO, ZI-RUI XING .....	619
<b>A NEW FUZZY SYNTHETIC EVALUATION MODEL FOR TEACHING QUALITY</b>	
HUI-ZHU TIAN, CHEN-XIA JIN .....	624
<b>THE APPLICATION OF PCA IN THE BASIC PUBLIC SERVICE SYSTEM</b>	
JUAN WANG, RUI-HONG WANG, JIAN-GUO SHI, YAN-JIE LIU .....	630
<b>DEMAND ON HUMAN RESOURCE PREDICTION OF SHIJIAZHUANG NATIONAL BIO-INDUSTRY</b>	
CONG-MAN WANG, MEI YANG .....	634
<b>CAMPUS SECURITY EVALUATION BASED ON TOPSIS METHOD</b>	
WEI-GE JI, YA-NAN WANG, SHU-WEN DU .....	639
<b>SOCIAL NETWORK ANALYSIS IN ENVIRONMENTAL MANAGEMENT OF PARAXYLENE PROJECT</b>	
MENG-HUA SONG .....	643
<b>ROBUST <math>H_{\infty}</math> FILTERING FOR A CLASS OF NONLINEAR UNCERTAIN SINGULAR SYSTEMS WITH TIME DELAY</b>	
JI-QING QIU, ZI-RUI XING, LI LI, MO-HAN YANG, YI LI .....	648
<b>CO-COMPETITION GAME ANALYSIS OF MOBILE COMMUNICATION MARKET AFTER COMPANY RESTRUCTURING</b>	
KE-FEI LIU, RAN ZHAO .....	654
<b>DUAL-OBJECTIVE ROBUST OPTIMIZATION ON SUPPLY CHAIN UNDER DEMAND UNCERTAINTY</b>	
WEI-MIN MA, FENG MAO .....	660
<b>RELOCATION TASKS AND A HIERARCHICAL SUBCLASS</b>	
PAVEL SURYNEK .....	666
<b>COMPARATIVE STUDY ON C2C E-COMMERCE CREDIT EVALUATION SYSTEM</b>	
XUE-MEI WANG, MEI YANG, JIANG-TAO LI .....	670
<b>LOCAL STABILITY OF A CO-OPEITION MODEL BETWEEN TWO TRANSPORTATION MODES WITH DELAYS</b>	
QIN GAO, MING-LEI ZHANG .....	675
<b>RESEARCH ON AFFECTING FACTORS OF OPERATIONAL RISK MANAGEMENT FOR COMMERCIAL BANK BASED ON STRUCTURAL EQUATION MODEL</b>	
LI-JUN LIANG, FAN-CHEN MENG, LI-JIE CAO .....	679

**Statistical Classification**

<b>PROBABILISTIC REASONING ON BACKGROUND NET: AN APPLICATION TO TEXT CATEGORIZATION</b>	
SIO-LONG LO, LIYA DING .....	688
<b>A MODULARLY VECTORIZED TWO DIMENSIONAL LDA FOR FACE RECOGNITION</b>	
HUXIDAN, WAN-QUAN LIU, CHONG LU .....	695
<b>SEQUENTIAL TRAINING OF SEMI-SUPERVISED CLASSIFICATION BASED ON SPARSE GAUSSIAN PROCESS REGRESSION</b>	
RONGQING HUANG, SHILIANG SUN .....	702
<b>A GROWING BAYESIAN SELF-ORGANIZING MAP FOR DATA CLUSTERING</b>	
XIAO-LIAN GUO, HAI-YING WANG, DAVID H. GLASS .....	708
<b>AN IMPROVED GAUSSIAN MIXTURE MODEL BASED ON LEAST-SQUARES CROSS-VALIDATION AND GAUSSIAN PSO WITH GAUSSIAN JUMP</b>	
XIN WANG, HUI-BIN WANG, HAI-TAO LIU .....	714
<b>SEMI-AUTOMATIC IMAGE ANNOTATION USING SPARSE CODING</b>	
WEIFENG ZHANG, ZENGCHANG QIN, TAO WAN .....	720

<b>SEGMENTATION OF BLOOD VESSELS IN COLOR FUNDUS IMAGES BASED ON OPTIMAL MULTI-THRESHOLD METHOD</b>	
FA-LING YI, WEN-HUA XU .....	725
<b>A NEW ACTIVE LEARNING STRATEGY IN NEAREST NEIGHBOR CLASSIFIER</b>	
WEI-RAN SONG, YONG-HUA CAI, BO WU, TAO SUN .....	729
<b>IMBALANCED DATA CLASSIFICATION ALGORITHM BASED ON HYBRID MODEL</b>	
XIANG YU, XIAOLONG ZHANG .....	735
<b>THE HOURLY LOAD FORECASTING BASED ON LINEAR GAUSSIAN STATE SPACE MODEL</b>	
YANXIA LU, HUI-FENG SHI.....	741
<b>THE STUDY OF COAL PORT THROUGHPUT FORECASTING BASED ON IMPROVED GREY PREDICTION MODEL</b>	
SHUANG LIU, LI-XIA TIAN, YUAN-SHENG HUANG.....	748
<b>AN INTEGRAL CHI2 ALGORITHM FOR DISCRETIZATION OF REAL VALUE ATTRIBUTES</b>	
LI ZOU, DE-QIN YAN, YU SANG .....	752
<b>A WEIGHTED FLEXIBLE NAIVE BAYESIAN CLASSIFIER FOR CONTINUOUS ATTRIBUTES</b>	
WAN-GUO YU, YONG-HUA CAI.....	756

## Symbolic, Structural and Syntactic Learning

<b>INTEGRATING N-GRAM MODEL INFORMATION FOR CHINESE WORD SEGMENTATION BASED ON CONDITIONAL RANDOM FIELDS</b>	
YING XIONG .....	762
<b>KOREAN-CHINESE STATISTICAL TRANSLATION MODEL</b>	
SHUO LI, DEREK F. WONG, LIDIA S. CHAO.....	767
<b>SIMILARITY CALCULATION OF FUSION SENTENCE SURFACE INFORMATION AND THE SYNTAX STRUCTURE</b>	
HAI-YAN KANG, QING-HUA LI, XIAO-JIAO YUAN, JUN-LING REN .....	773
<b>A FUZZY EXTENSION OF ONTOLOGY WITH CUSTOM DATATYPE</b>	
FA-GUI LIU, YONG-XUE HUANG, YUE-DONG LIN .....	779
<b>COUPLED HIDDEN SEMI-MARKOV CONDITIONAL RANDOM FIELDS BASED CONTEXT MODEL FOR SEMANTIC MAP BUILDING</b>	
RONG-HUA LUO, HUA-QING MIN, YONG-HUI XU, JUN-BO LI .....	785
<b>AN IMPROVED VQ BASED ALGORITHM FOR RECOGNIZING SPEAKER-INDEPENDENT ISOLATED WORDS</b>	
DING-DING MA, XIAO-QIN ZENG.....	792
<b>THE KEY THEOREM OF LEARNING THEORY WITH SAMPLES CORRUPTED BY ZERO-EXPECT NOISE ON CHANCE SPACE</b>	
JUN-HUA LI, HAI-JUN LI, QIANG HE .....	797
<b>RULES ACQUISITION IN CONSISTENT FORMAL DECISION CONTEXTS</b>	
LING WEI, TAO LI .....	801
<b>AN ALGORITHM FOR DECISION TREE AND ATTRIBUTE REDUCTION</b>	
QUN-FENG ZHANG, YU-FEN ZHANG, MING-ZHU HAO .....	806
<b>SAMPLE SELECTION BASED ON MULTIPLE INCREMENTAL DECISION TREES IN BSP PROGRAMMING LIBRARY</b>	
SHUO WANG, JIAN-JIAN WANG, YI WANG, XUE-ZHENG WANG .....	810

# **2012 International Conference on Machine Learning and Cybernetics**

  

## **(ICMLC 2012)**

**Xian, Shaanxi, China  
15 – 17 July 2012**

**Volume 3  
Pages 816-1251**



**IEEE Catalog Number: CFP12523-PRT  
ISBN: 978-1-4673-1484-8**

# Contents

<b>Greetings from the General Chairs .....</b>	I
<b>Greetings from the Program Committee Chairs .....</b>	II
<b>Organizing Committee.....</b>	IV
<b>Organizing Committee of IWWIP.....</b>	VI
<b>Program Committee.....</b>	VII
<b>Program Committee of IWWIP.....</b>	VIII
<b>List of Reviewers.....</b>	IX
<b>List of Reviewers for IWWIP .....</b>	XI

## Contributed Papers

### Systems and Controls

<b>CONTROL AND SCHEDULING CO-DESIGN OF NETWORKED CONTROL SYSTEM: OVERVIEW AND DIRECTIONS ZHI-WEN WANG, HONG-TAO SUN .....</b>	816
<b>APPLICATION OF ANFIS IN THE DESIGN OF FUZZY CONTROLLER TENG-FEI LI, CHAO-YING LIU, ZHE-YING SONG, XUE-LING SONG, QING-QING YAN .....</b>	825
<b>MODELING DRIVER LANE CHANGING CONTROL WITH THE QUEUING NETWORK-MODEL HUMAN PROCESSOR LU-ZHENG BI, JUN-XING SHANG, GUO-DONG GAN .....</b>	830
<b>THE APPLICATION OF GA-BASED PID PARAMETER OPTIMIZATION FOR THE CONTROL OF SUPERHEATED STEAM TEMPERATURE WANG JING, XUE YANG, CHEN LEI.....</b>	835
<b>EXTERNAL OPTIMIZATION CONTROLLER IN OPTIMAL CONTROL OF THERMAL POWER UNITS YUE ZHANG, HONG-BING XU, MENG-JIAO LIU, WEI-YAN CHEN.....</b>	840
<b>A ROBUST CONTROLLER BASED ON EXTENSION THEORY FOR SWITCHED RELUCTANCE MOTOR DRIVES KUEI-HSIANG CHAO, PI-YUN CHEN .....</b>	845
<b>ROBUST ADAPTIVE CONTROL FOR A CLASS OF SWITCHED NONLINEAR SYSTEMS IN PURE-FEEDBACK FORM BAI-CHENG ZHU, TIAN-PING ZHANG .....</b>	851
<b>PDF SHAPING CONTROL FOR NON-GAUSSIAN STOCHASTIC DISTRIBUTION SYSTEMS WITH TIME-DELAY YAO AN, YANG YI, TIAN-PING ZHANG, QIAN-SHUANG SUN.....</b>	857
<b>EFFECT OF TIME DELAY ON NONLINEAR CONTROL SYSTEM XIN-NA MA, SHU-FENG DUAN, CHANG-XIA HU, YING-XIN HU .....</b>	864

<b>BMP: A SELF-BALANCING MOBILE PLATFORM</b>	868
BIN-BIN LI, JIN-HUI ZHU, HUA-QING MIN .....	
<b>MICROCONTROLLER BASED AUTOMATIC PARKING SYSTEM</b>	875
TRONG-YEN LEE, CHI-FENG LEE .....	
<b>ALGORITHMS RESEARCH AND APPLICATION OF DECOUPLING INTERNAL MODEL CONTROLLER</b>	880
XIU-ZHANG JIN, FEI-CHAO YAN, SHOU-HUI WANG .....	
<b>RELAY FEEDBACK BASED ON FUZZY MULTIPLE MODEL AND ITS APPLICATION TO THE 330 MW UNIT COORDINATED CONTROL SYSTEM</b>	884
JIAN-PING SUN, YA-LUN LI, MING GAO .....	
<b>ADAPTIVE CONTROL OF INDUSTRIAL WINDING MULTIVARIABLE PROCESS SYSTEM</b>	890
YAN-MING HUO, ZHENG LI, JI-QING QIU .....	
<b>RELATIVE STABILITY ANALYSIS OF TWO HYBRID SYSTEMS</b>	894
YONG-YAN FAN, JIN-HUA WANG, JING ZHANG, CHONG WANG .....	

## Systems Modeling and Analysis

<b>STATISTICAL FAULT LOCALIZATION USING EXECUTION SEQUENCE</b>	899
ZUNWEN YOU, ZENGCHANG QIN, ZHENG ZHENG .....	
<b>WINDMILL INDEX ALGORITHM : A ENERGY-EFFICIENT MECHANISM TO IMPROVE THE PERFORMANCE OF WIRELESS DATA BROADCASTING</b>	906
HAW-YUN SHIN, GUO-CHENG LI .....	
<b>A DECISION DATA SUPPORT MODE SUITED TO COMMANDER'S ASSOCIATIVE THINK PATTERN</b>	913
XIN JIN, JING-JING YAN, WEI-TAI LIANG, YOU-JIANG LI .....	
<b>STUDY ON NODE IMPORTANCE OF COMPLEX NETWORK BASED MILITARY COMMAND CONTROL NETWORKS</b>	920
JIN-XING LIU, SHAO-DONG CHEN, YAN-GAO WANG .....	
<b>SHORT-TERM WIND SPEED FORECASTING COMBINED TIME SERIES METHOD AND ARCH MODEL</b>	924
MENG-DI WANG, QI-RONG QIU, BING-WEI CUI .....	
<b>UNCERTAINTY AND INCOMPLETENESS ANALYSIS USING THE RIMER APPROACH FOR URBAN REGENERATION PROCESSES: THE CASE OF THE GREATER BELFAST REGION</b>	928
ALBERTO CALZADA, JUN LIU, HUI WANG, ANIL KASHYAP .....	
<b>CASCADING NETWORK FAILURE BASED ON LOCAL LOAD DISTRIBUTION AND NON-LINEAR RELATIONSHIP BETWEEN INITIAL LOAD AND CAPACITY</b>	935
YI-HUA MA, DONG-LI ZHANG .....	
<b>ON THE QUANTITATIVE ASSESSMENT OF THE LANE DEPARTURE WARNING SYSTEM BASED ON ROAD SCENES SIMULATOR</b>	941
YAN WANG, JING FU, XIANG-JING AN, JIAN LI, ER-KE SHANG .....	
<b>SYSTEM IDENTIFICATION FROM SMALL DATA SETS USING AN OUTPUT JITTERING METHOD WITH APPLICATION TO MODEL ESTIMATION OF BIOETHANOL PRODUCTION</b>	949
JING YANG, HUA-LIANG WEI, VISAKAN KADIRKAMANATHAN, XIAOFANG LIN .....	
<b>A DISTRIBUTED SCHEDULING FRAMEWORK FOR ASYMMETRIC MULTI-CORE SYSTEMS BASED ON GRIDWARE</b>	956
RUI-ZHONG CHEN, DE-YU QI .....	
<b>A METHOD OF DETERMINING THE FUZZY MEASURE BASED ON KNOWLEDGE FACTORS</b>	961
FA-CHAO LI, ZAN ZHANG .....	
<b>DISCRIMINATION BETWEEN EXTERNAL SHORT CIRCUIT AND INTERNAL WINDING FAULT IN POWER TRANSFORMER USING DISCRETE WAVELET TRANSFORM AND BACK-PROPAGATION NEURAL NETWORK</b>	965
C. JETTANASEN, J. KLOMJIT, S. BUNJONGJIT, A. NGAOPITAKKUL, B. SUECHOY, N. SUTTISINTHONG, B. SEEWIROTE .....	
<b>STUDY ON COOPERATIVE ATTACK STRATEGY TO TIME-SENSITIVE TARGET BASED PROACTIVE INFORMATION DELIVERY</b>	972
SHAO-DONG CHEN, JIN-XING LIU .....	
<b>MODELING THE ROLE OF CSAR TEAM BASED ON AML</b>	977
SHAO-DONG CHEN, JIN-XING LIU .....	
<b>THE INSTANTANEOUS FREQUENCY EXTRACTION OF GPR B-SCAN DATA BASED ON HHT METHOD</b>	982
LU GAN, LONG ZHOU, XINGE YOU, JUAN XIAO .....	
<b>A NEW DEA MODEL ON SCIENCE AND TECHNOLOGY RESOURCES OF INDUSTRIAL ENTERPRISES</b>	986
LI-NA YUAN, LI-NA TIAN .....	

<b>A SIMULATION ASSISTED NEURAL-NETWORKS FORECASTING SYSTEM ON THE OPTIMIZATION BETWEEN WIP AND THROUGHPUT FOR TFT-LCD COLOR FILTER FABS</b>	
POT-SANG B. HUANG, CHENG-WEI YU, JAMES C. CHEN, CHIH-CHENG CHEN, TZU-WEI PENG, YU-YAO WEI, CHAO-HSUAN FENG .....	991
<b>CHARACTERIZATION OF GAS-LIQUID TWO-PHASE FLOW PATTERN BASED ON COMPLEXITY MEASURES ANALYSIS</b>	
FANG DONG, LI-DE FANG, HONG-LIAN LI, YAN ZHU .....	996
<b>TRANSCRIPTIONAL COOPERATIVITY IN MOLECULAR DYNAMICS BASED ON NORMAL MODE ANALYSIS</b>	
DEBBY D. WANG, HONG YAN, QIANG HE .....	1001
<b>FRS-BASED DECISION TABLE REDUCTION FOR THE OPERATION OPTIMIZATION OF LARGE COAL-FIRED POWER UNITS</b>	
NING-LING WANG, DE-GANG CHEN, YONG-PING YANG, TING ZHANG .....	1007
<b>EVALUATION OF INPUT AND OUTPUT EFFICIENCY OF SCIENCE AND TECHNOLOGY BASED ON DEA MODEL</b>	
DONG-MEI LI, BIN LIU, YING QU .....	1014
<b>THE RISK FACTOR ANALYSIS FOR SOFTWARE PROJECT BASED ON THE INTERPRETATIVE STRUCTURAL MODELLING METHOD</b>	
YING QU, MENG-JIA YUAN, FENG LIU .....	1019
<b>RESEARCH ON SMART GRID ANALYSIS BASED ON INFORMATIZATION</b>	
LONG ZHOU, JUN CHEN, JU-TAO HUANG, JIAN-WEN HUANG.....	1025
<b>MONITORING SYSTEM FOR SMART GRID</b>	
HAO-TIAN ZHANG, LOI LEI LAI .....	1030

## Text and Multimedia Information Retrieval

<b>NEAR-DUPLICATE IMAGE DETECTION WITH CASCADE METHOD</b>	
YU-DONG CAO .....	1038
<b>IMAGE RETRIEVAL BASED ON GAUSSIAN MIXTURE MODEL</b>	
FAN-HUI KONG .....	1043
<b>MODIFIED ADABOOST BASED OCSVM ENSEMBLE FOR IMAGE RETRIEVAL</b>	
HONG-JIE XING, JIAN-GUO WU, XUE-FANG CHEN .....	1048
<b>RESEARCH AND DESIGN OF AUTO GUARD AGAINST THEFT BASED ON FINGERPRINT IDENTIFICATION</b>	
JUN-YING GAN, XI-FENG DONG.....	1054

## Visual and Audio Information Processing

<b>IMPROVING HUMAN ACTIVITY RECOGNITION USING SUBSPACE CLUSTERING</b>	
HUIQUAN ZHANG, OSAMU YOSHIE .....	1058
<b>MSHS: THE MEAN-STANDARD DEVIATION CURVE MATCHING ALGORITHM IN HSV SPACE</b>	
ZHI-HENG WANG, SHAN-SHAN ZHI, HONG-MIN LIU .....	1064
<b>IMAGE SUPER-RESOLUTION BASED ON MULTIKERNEL REGRESSION</b>	
YING GU, YAN-YUN QU, TIAN-ZHU FANG .....	1070
<b>THE APPLICATION OF THE BINOCULAR CAMERA TO CROWD DENSITY ESTIMATION</b>	
SEN GUO, SAN-FENG CHEN .....	1076
<b>THE RESEARCH FOR TAMPER FORENSICS ON MPEG-2 VIDEO BASED ON COMPRESSED SENSING</b>	
YAN ZHOU, FAN-ZHI ZENG, GUANG-FA YANG .....	1080
<b>A NEW CIRCLE DETECTION METHOD BASED ON PARALLEL OPERATOR</b>	
LI-QIN JIA, CHENG-ZHANG PENG .....	1085
<b>TRAJECTORY-BASED HUMAN ACTIVITY RECOGNITION USING HIDDEN CONDITIONAL RANDOM FIELDS</b>	
QING-BIN GAO, SHI-LIANG SUN .....	1091
<b>HAND SEGMENTATION IN COMPLEX ENVIRONMENT BASED ON SKIN COLOR MODEL AND BOUNDARY CUTTING</b>	
XIN CUI, WEI BU, XIANG-QIAN WU, QIU-SHI ZHAO .....	1098
<b>COMPARATIVE STUDY OF COLOR FEATURE FOR PARTICLE FILTER BASED OBJECT TRACKING</b>	
HONG-YING SHEN, SHUI-FA SUN, XIAN-BING MA, YI-CHUN XU, BANG-JUN LEI.....	1104
<b>OBJECT LOCALIZATION BASED ON DISCRIMINATIVE VISUAL WORDS</b>	

SU-WEN FANG, YAN-YUN QU, CHENG CHEN, SHU-YANG SONG .....	1111
<b>FRACTAL DIMENSION AS A SYMMETRY MEASURE IN 3D BRAIN MRI ANALYSIS</b>	
SURANI ANURADHA JAYASURIYA, ALAN WEE-CHUNG LIEW .....	1118
<b>IMAGE SALIENCY DETECTION BASED ON LOCAL AND REGIONAL FEATURES</b>	
YING-CHUN GUO, WEN-WEN PAN, XIAO-MIN YUE .....	1124
<b>PALMPRINT RECOGNITION USING PALM-LINE DIRECTION FIELD TEXTURE FEATURE</b>	
YAN-XIA WANG, GUANG-HUA SUN .....	1130
<b>DOUBLE WEIGHTED FCM ALGORITHM FOR COLOR IMAGE SEGMENTATION</b>	
DE-YU TANG, JIN YANG, YI-SHUAN HUANG .....	1135
<b>OPTICAL COHERENCE TOMOGRAPHY HEART TUBE IMAGE DENOISING BASED ON CONTOURLET TRANSFORM</b>	
QING GUO, SHUI-FA SUN, FANGMIN DONG, BRUCE Z. GAO, RUI WANG .....	1139
<b>A CIRCULAR SEAL REGISTRATION METHOD BY TRANSFORMING THE ROUND REGION INTO RECTANGULAR REGION</b>	
JISHENG LIANG, WEI LI, HUI WANG, ZIBO YUAN .....	1145
<b>APPLE RECOGNITION BASED ON MACHINE VISION</b>	
GUO-QUAN JIANG, CUI-JUN ZHAO .....	1148
<b>GEOMETRICALLY ROBUST IMAGE HASHING SCHEME FOR IMAGE AUTHENTICATION</b>	
YAN WO, BO ZHANG .....	1152
<b>A NOVEL FAST INTRA MODE DECISION ALGORITHM USING HISTOGRAM FOR H.264 VIDEO CODING</b>	
YINGZHE LIU, JINXIANG WANG, FANGFA FU .....	1158
<b>AN EFFICIENT VISUAL TRACKING METHOD BASED ON SINGLE CCD CAMERA</b>	
KAI HAN, XUAN WANG, CHENGLONG YU .....	1163
<b>ITERATIVE DATA ADAPTIVE ANISOTROPIC IMAGE FILTERING</b>	
CHANG-CAI YANG, XIN-YI ZHENG, JIN-WEN TIAN, KE SHANG, XIN TIAN, WEI HAO .....	1169
<b>A NOVEL METHOD FOR AUTOMATIC HARD EXUDATES DETECTION IN COLOR RETINAL IMAGES</b>	
XIANG CHEN, WEI BU, XIANG-QIAN WU, BAISHENG DAI, YAN TENG .....	1175
<b>3D MODEL ESTIMATION USING A SINGLE RGB-D IMAGE</b>	
RICKY JUN-BO LI, RONG-HUA LUO, HUA-QING MIN .....	1182
<b>LABEL TRANSFER FOR JOINT RECOGNITION AND SEGMENTATION OF 3D OBJECT</b>	
YONG-HUI XU, RONG-HUA LUO, HUA-QING MIN .....	1188
<b>ACTION RECONGINITON USING HUMAN POSE</b>	
CONG CHEN, HUA-QING MIN, RONG-HUA LUO .....	1193
<b>AN IMPROVED METHOD OF WATERSHED TRANSFORM ON IMAGE OF CASHMERE AND WOOL FIBRE</b>	
SHU-YUAN SHANG, YA-XIA LIU, FEI-FEI MENG .....	1199
<b>RECOVERING DEPTH FROM IMAGES USING ADAPTIVE DEPTH FROM FOCUS</b>	
BING-ZHONG JING, DANIEL S. YEUNG .....	1205

## Numerial Optimizations

<b>THE APPLICATION OF IMPROVED EVOLUTIONARY STRATEGY ALGORITHM IN OPTIMIZATION</b>	
LI YANG, QING-LAN JIA .....	1212
<b>BOOSTING-GENETIC CLUSTERING ALGORITHM</b>	
PIYAPHOL PHOUNGPOL, INTHIRA SRIVRUNYOO .....	1218
<b>DESIGN OF PARAMETER ESTIMATOR USING ANT COLONY SYSTEM</b>	
HUNG-CHING LU, HSI-KUANG LIU, LIAN-FUE YANG .....	1224
<b>A CLASSIFICATION METHOD BASED ON IMMUNE GENETIC ALGORITHM</b>	
JING-KAI LI, JIAN CHEN, HUA-QING MIN .....	1231
<b>HYBRID LINEAR AND NONLINEAR WEIGHT PARTICLE SWARM OPTIMIZATION ALGORITHM</b>	
JIAN-RU ZHENG, GUO-LI ZHANG, HUA ZUO .....	1237
<b>EVALUATING THE RELIABILITY OF EMERGENCY LOGISTICS SYSTEM BASED ON FUZZY LINGUISTIC APPROACH</b>	
CHUN-MEI LIU .....	1242
<b>SHORT-TERM HYDRO-THERMAL SCHEDULING WITH ARTIFICIAL BEE COLONY</b>	
S SHAIK, F Y XU, C S LAI, N SINHA, L L LAI .....	1247

# **2012 International Conference on Machine Learning and Cybernetics**

  

## **(ICMLC 2012)**

**Xian, Shaanxi, China  
15 – 17 July 2012**

**Volume 4  
Pages 1252-1655**



**IEEE Catalog Number: CFP12523-PRT  
ISBN: 978-1-4673-1484-8**

# Contents

<b>Greetings from the General Chairs .....</b>	I
<b>Greetings from the Program Committee Chairs .....</b>	II
<b>Organizing Committee.....</b>	IV
<b>Organizing Committee of IWWIP.....</b>	VI
<b>Program Committee.....</b>	VII
<b>Program Committee of IWWIP.....</b>	VIII
<b>List of Reviewers.....</b>	IX
<b>List of Reviewers for IWWIP.....</b>	XI

## Contributed Papers

### Web Information Processing

<b>WHAT IS THE ROLE OF PHYSICAL LOCATION IN OUR ONLINE SOCIAL NETWORKS?</b>	
GABRIEL PUI CHEONG FUNG, KAI-ON CHOW, TAK-LAM WONG .....	1252
<b>A VARIANT EPIDEMIC PROPAGATION MODEL SUITABLE FOR RUMOR SPREADING IN ONLINE SOCIAL NETWORK</b>	
HUI WANG, LIN DENG, YI-SHUAN HUANG, SHU ZHAO .....	1258
<b>IMPROVING WEBPAGE CONTENT EXTRACTION BY EXTENDING A NOVEL SINGLE PAGE EXTRACTION APPROACH: A CASE STUDY WITH THAI WEBSITES</b>	
WIGRAI THANADECHTEEMAPAT, CHUN CHE FUNG .....	1263
<b>AN EFFICIENT WEB DOCUMENT CLUSTERING ALGORITHM FOR BUILDING DYNAMIC SIMILARITY PROFILE IN SIMILARITY-AWARE WEB CACHING</b>	
JI-TIAN XIAO .....	1268
<b>UNDERSTANDING AND MODELING THE DEEP WEB FOR INTEGRATED ENVIRONMENT</b>	
WEI LIU, JIAN-JUN QI, BO TANG, LI ZHAO .....	1274

### Other

<b>SMOOTH TEST FOR ELLIPTICAL SYMMETRY</b>	
YAN SU.....	1279

<b>AN APPROACH TO THE MISLEADING ACTION SOLVING IN PLAN RECOGNITION</b>	1285
LI LI, DA-YONG WANG, YAN WANG, WEN-XIANG GU .....	
<b>IDENTIFICATION OF FRACTIONAL ORDER SYSTEM USING PARTICLE SWARM OPTIMIZATION</b>	1290
LI MENG, DONG-FENG WANG, PU HAN .....	
<b>COMPARISON OF QUANTIZED STATE ESTIMATORS WITH DIFFERENT TRANSMITTED INFORMATION FORMS</b>	1296
XIAO-LIANG XU, XIAN-FENG TANG, BING-LEI GUAN, QUAN-BO GE .....	
<b>FORMAL ANALYSIS OF DIAGNOSTIC NOTIONS</b>	1303
XUE-NONG ZHANG .....	
<b>REAL-TIME ANALYTICS PROCESSING WITH MAPREDUCE</b>	1308
CHENG-ZHANG PENG, ZE-JUN JIANG, XIAO-BIN CAI, ZHI-KE ZHANG .....	
<b>LHS: A NOVEL METHOD OF INFORMATION RETRIEVAL AVOIDING AN INDEX USING LINEAR HASHING WITH KEY GROUPS INDEDUPLICATION</b>	1312
ZHI-KE ZHANG, ZEJUN JIANG, ZHIQIANG LIU, CHENG-ZHANG PENG .....	
<b>ENDPOINT LEARNING FOR MULTILINEAR COMMUTATOR OF SINGULAR INTEGRAL ON SPACE OF HOMOGENEOUS TYPE</b>	1319
JIAN-GUO SHI, JUAN WANG, MENG ZHOU, BING YIN, YAN-FANG SHI .....	
<b>COMPUTING THE SET OF CONCEPTS THROUGH THE COMPOSITION AND DECOMPOSITION OF FORMAL CONTEXTS</b>	1326
JIAN-JUN QI, WEI LIU, LING WEI .....	
<b>A SMOOTHED RANK FUNCTION ALGORITHM BASED HYPERBOLIC TANGENT FUNCTION FOR MATRIX COMPLETION</b>	1333
JUAN GENG, LAI-SHENG WANG, AI-MIN FU, QI-QING SONG .....	

## **Application of image possessing to Weather Forecasting, Traffic Flow, and Electric Tomography**

<b>DOPPLER WEATHER RADAR CLUTTER SUPPRESSION BASED ON TEXTURE FEATURE</b>	1339
PING WANG, KAO-JI XU, YUAN ZHANG, HUI-ZHEN JIA .....	
<b>STRONG CONVECTIVE ECHOES IDENTIFICATION BASED ON ROUGH SET THEORY</b>	1345
ZHI-YING LU, JIAN-PEI WANG .....	
<b>RESEARCH ON SHADOW ELIMINATION IN INTELLIGENT TRAFFIC MONITORING</b>	1350
JUN-TAO XUE, LONG-YUN HUI, SHAO-FANG XING .....	
<b>ROBUST WATERMARKING OF DIGITAL IMAGE BASED ON FEATURE AND DWT</b>	1356
JUN ZHANG, MEI-NA SUN, MEI-JING GE, ZHENG-LING YANG, JUN-TAO XUE, LIANG WANG .....	
<b>DUAL BACKGROUND MODELING OF TRAFFIC IMAGE BASED ON LBP AND GAUSSIAN</b>	1362
JUN-TAO XUE, CUI-RONG WANG, SHAO-FANG XING .....	
<b>COMPARISION OF ELECTRICAL IMAGING ALGORITHMS BY OPTICS TOOL</b>	1367
SHI-HONG YUE, LI-JUN CUI, PENG-LONG WANG .....	
<b>EMPIRICAL STUDY OF ROBUST COMBINATION OF FORECASTS FOR SHORT-TERM HIGHWAY TRAFFIC FLOW FORECAST</b>	1372
ZHENG-LING YANG, YAN LI, YAN-WEN SONG, XI CHEN, JUN ZHANG .....	

## **Ensemble learning and multi-label learning**

<b>FAST NORMALIZED CUT ALGORITHM BASED ON SELF-ORGANIZING MAP</b>	1376
ZHI-WEN YU, JANE YOU, GUO-QIANG HAN, LE LI, XIAOWEI WANG .....	
<b>STRUCTURE ENSEMBLE BASED ON FUZZY C-MEANS</b>	1383
ZHI-WEN YU, LE LI, DA-XING WANG, JANE YOU, GUO-QIANG HAN, HANTAO CHEN .....	
<b>DOUBLE PARTITION AROUND MEDOIDS BASED CLUSTER ENSEMBLE</b>	1390
LE LI, JANE YOU, GUO-QIANG HAN, HANTAO CHEN .....	
<b>REPRESENTATIVE MULTI-LABEL BAYESIAN APPROACH FOR IMAGE CLASSIFICATION</b>	1395
ZHI-WEN YU, XIAOWEI WANG, JANE YOU, GUO-QIANG HAN, LE LI .....	
<b>DUAL NEURAL GAS BASED STRUCTURE ENSEMBLE WITH THE BAGGING TECHNIQUE</b>	1400
HANTAO CHEN, XIAODONG ZHANG, JANE YOU, GUO-QIANG HAN, LE LI .....	
<b>DOUBLE SPACE BASED MULTIOBJECTIVE EVOLUTIONARY ALGORITHM</b>	

JUNCHI LIANG, JANE YOU, GUO-QIANG HAN, LE LI .....	1406
<b>AN ALGORITHM FOR PLANARITY TESTING BY ADJACENCY MATRIX</b>	
SHI-QUN LI, QIAN-LI MA .....	1412
<b>ADAPTIVE LEARNING BASED FAULT TOLERANT CONTROL FOR UNCERTAIN NONLINEAR SYSTEMS</b>	
QINMIN YANG, BINGNAN LIU, ZHI-WEN YU.....	1418

## Fuzzy Systems

<b>USING THE FUZZY ANALYTIC HIERARCHY PROCESS TO THE BALANCED SCORECARD: A CASE STUDY FOR THE ELEMENTARY AND SECONDARY SCHOOLS' INFORMATION DEPARTMENT OF SOUTH TAIWAN</b>	
YI-HUI LIANG.....	1424
<b>APPLICATION OF HIGH-LEVEL FUZZY PETRI NETS TO INVESTMENT DECISIONS OF STOCK MARKETS</b>	
VICTOR R.L. SHEN, WEI-CHENG LI, SHYI-MING CHEN .....	1429
<b>A CLOUD DECISION SUPPORT SYSTEM FOR THE RISK ASSESSMENT OF CORONARY HEART DISEASE</b>	
SHENG-JEN JIAN, RUEY-KEI CHIU, SHIN-AN WANG .....	1435
<b>THE IMPLEMENTATION OF AN INTELLIGENT CLOUD SERVICE SYSTEM FOR DISEASE RISK ASSESSMENT – CHRONIC KIDNEY DISEASE AS AN EXAMPLE</b>	
SHIN-AN WANG, RUEY-KEI CHIU, SHENG-JEN JIAN.....	1441
<b>THE FUZZY APPROACH FOR CLASSIFICATION OF THE PHOTO COMPOSITION</b>	
CHIAN-LI WEN, TSORNG-LIN CHIA .....	1447
<b>A NEW METHOD FOR WEIGHTED FUZZY INTERPOLATIVE REASONING BASED ON PSO-BASED WEIGHTS-LEARNING TECHNIQUES</b>	
SHYI-MING CHEN, WEN-CHYUAN HSIN, YU-CHUAN CHANG.....	1454
<b>A NEW METHOD FOR EVALUATING STUDENTS' ANSWERSCRIPTS BASED ON INTERVAL-VALUED INTUITIONISTIC FUZZY SETS</b>	
SHYI-MING CHEN, TENG-SHUN LI, SUZ-WEI YANG, TIAN-WEI SHEU.....	1461

## Image Feature Detection and Description

<b>A ROBUST METHOD OF FINGERTIP DETECTION IN COMPLEX BACKGROUND</b>	
XIAO-HENG JIANG, JIANG-WEI LI, KONG-QIAO WANG, YAN-WEI PANG .....	1468
<b>AN EARLY SMOKE DETECTION SYSTEM BASED ON INCREMENT OF OPTICAL FLOW RESIDUAL</b>	
YANG ZHAO, WEI LU, YAN ZHENG, JIAN WANG .....	1474
<b>GENERATING DIVERSE AND RELEVANT IMAGE SEARCHING RESULTS WITH DIVRANK</b>	
JING LI, ZHONG JI, JING ZHANG, YU-TING SU .....	1480
<b>HAND SEGMENTATION USING SKIN COLOR AND BACKGROUND INFORMATION</b>	
WEI WANG, JING PAN .....	1487
<b>IMAGE SEARCH RERANKING WITH RANKING LINEAR DISCRIMINANT ANALYSIS</b>	
TIAN-SHI YU, ZHONG JI, PEI-GUANG JING, YU-TING SU .....	1493
<b>MRF RESTORATION BASED ON REGULARIZATION</b>	
MING YU, YU-HAO YANG, CUI-HONG XUE, GANG YAN, CHAO JIA, JING-XIN WANG .....	1498
<b>ROAD SIGN DETECTION USING SPECIFIC COLOR-PAIR INFORMATION</b>	
QUN CAO, JIAN WANG, WEI LU .....	1503

## Information Retrieval and Optimization Modeling

<b>GROUP MOBILITY MODEL IN DISASTER AREA NETWORKS</b>	
XU-FENG SHANG, YU-BO YUAN.....	1508
<b>SOME ITERATIVE METHODS FOR PRECONDITIONED LINEAR SYSTEMS</b>	
ZHUAN-DE WANG, CHUAN-SHENG YANG .....	1514
<b>ANALYTICAL SOLUTION FOR THE TIME-DEPENDENT EMDEN-FOWLER TYPE OF EQUATIONS BY VARIATIONAL ITERATION METHOD</b>	
XU-FENG SHANG, YU-BO YUAN.....	1518
<b>A MODIFIED SOFTWARE RELIABILITY MODELING WITH COMPOUNDED-DECREASED-RATE</b>	
QING-RUI ZHANG, HOU-YING ZHU, YU-BO YUAN .....	1523

<b>A DEFORMED JARRATT'S METHOD FOR SOLVING NON-LINEAR EQUATION IN BANACH SPACE</b>	1530
XU-FENG SHANG, YU-BO YUAN .....	.....
<b>SECOND-ORDER DIFFERENTIAL APPROXIMATION FOR SCREW THREAD PITCH EQUIVALENT DIAMETER</b>	1535
XU-FENG SHANG, YU-BO YUAN .....	.....
<b>A THREE-DIMENSIONAL DISPLAY FOR BIG DATA SETS</b>	1541
CHENG-LONG MA, XU-FENG SHANG, YU-BO YUAN .....	.....

## Intelligent Information Mining

<b>AN ADAPTIVE SVD-BASEDWATERMARKING SCHEME BASED ON GENETIC ALGORITHM</b>	1546
CHIH-CHIN LAI, CHUNG-HUNG KO, CHIH-HSIANG YEH .....	.....
<b>GENETIC ALGORITHM ON FUZZY CODEBOOK TRAINING FOR SPEECH RECOGNITION</b>	1552
SHING-TAI PAN, CHING-FA CHEN, YING-WEI LEE .....	.....
<b>EVOLVING ENSEMBLE CLASSIFIERS FOR INCREMENTAL FACE RECOGNITION</b>	1559
BEEN-CHIAN CHIEN, CHIAO-RO LIN, PE-TING HOU, RONG-MING CHEN .....	.....
<b>MINING CONDENSED RULES FOR ASSOCIATIVE CLASSIFICATION</b>	1565
CHIH-HUNG WU, JING-YI WANG, CHIEN-JUNG CHEN .....	.....
<b>PROPOSING A RECOMMENDER SYSTEM THROUGH MINING ENGLISH READING COMPREHENSION ERRORS OF ENGINEERING STUDENTS</b>	1571
YEA-RU TSAI, YU-KON CHANG, CHEN-SEN OUYANG .....	.....
<b>A COMPARISON OF APPROACHES FOR DEALING WITH MISSING VALUES</b>	1576
CHIH-FENG LIU, THAO-TSEN CHEN, SHIE-JUE LEE .....	.....
<b>MULTI-VALUES NEURON WITH PERIODIC TOLERANT ACTIVATION FUNCTION</b>	1583
JIN-PING CHEN, SHIE-JUE LEE .....	.....

## Intelligent Systems: Methodologies and Applications

<b>A REVIEW ON EVALUATION OF MAXIMUM PERMISSIBLE CAPACITY OF DISTRIBUTED GENERATIONS CONNECTED TO A SMART GRID</b>	1589
NIEN-CHE YANG, TSAI-HSIANG CHEN .....	.....
<b>A FRAMEWORK OF FUZZY CONSTRAINT-DIRECTED AGENT NEGOTIATION WITH LEARNING ELEMENT</b>	1594
TING JUNG YU, K. ROBERT LAI .....	.....
<b>CONTROL OF NONLINEAR SYSTEMS USING NON-STATIONARY EMBEDDED RECURRENT FUZZY NEURAL NETWORKS</b>	1601
CHING-HUNG LEE, CHIH-MIN LIN, MING-SHU YANG .....	.....
<b>CASCADE SLIDING MODE CONTROL OF A SPHERICAL WHEEL ROBOT DRIVEN BY OMNI WHEELS</b>	1607
KUN-SHU HUANG, YU-HSIANG LIN, KUO-BIN LIN, BORE-KUEN LEE, CHI-KUANG HWANG .....	.....
<b>HIERARCHICAL SLIDING MODE CONTROL OF A SPHERICAL ROBOT DRIVEN BY OMNI WHEELS</b>	1612
CHUNG-WEI CHIU, CHIH-HU WANG, CHI-KUANG HWANG .....	.....
<b>CHAOS SYCHRONIZATION USING UN-NORMALIZED INTERVAL TYPE-2 FUZZY NEURAL CONTROLLER</b>	1617
CHING-HUNG LEE, FENG-YU CHANG, CHIH-MIN LIN .....	.....
<b>A SEMANTIC-BASED VIDEO SEGMENTATION METHOD</b>	1623
HUANG-CHIA SHIH, CHE-YEN CHUANG, HONG-WEI LEE .....	.....
<b>SKELETONIZATION BASED ON THE MEDIAL-AXIS AND SYMMETRY INFORMATION</b>	1627
YUNG-SHENG CHEN, MING-TE CHAO .....	.....
<b>REAL-TIME DYNAMIC VEHICLE DETECTION ON RESOURCE-LIMITED MOBILE PLATFORM</b>	1632
DUAN-YU CHEN, GUO-RUEI CHEN, YU-WEN WANG, JEN-YU YU, JUN-WEI HSIEH, CHI-HUNG CHUANG .....	.....
<b>INTERNET-BASED 8051 REMOTE IN-SYSTEM PROGRAMMING SYSTEM</b>	1638
YUNG-SHENG CHEN, MIN-TA SUNG, KUN-LI LIN .....	.....
<b>DESIGN OF INTELLIGENT LONG-TERM LOAD FORECASTING WITH FUZZY NEURAL NETWORK AND PARTICLE SWARM OPTIMIZATION</b>	1644
RONG-JONG WAI, YU-CHIH HUANG, YI-CHANG CHEN .....	.....
<b>PRECODING DESIGN FOR OFDMA UPLINK ANTENNA SELECTION SYSTEM</b>	1651
JUINN-HORNG DENG, YUH-CHERNG JANG .....	.....

# **2012 International Conference on Machine Learning and Cybernetics**

  

## **(ICMLC 2012)**

**Xian, Shaanxi, China  
15 – 17 July 2012**

**Volume 5  
Pages 1656-2051**



**IEEE Catalog Number: CFP12523-PRT  
ISBN: 978-1-4673-1484-8**

# Contents

<b>Greetings from the General Chairs .....</b>	I
<b>Greetings from the Program Committee Chairs .....</b>	II
<b>Organizing Committee.....</b>	IV
<b>Organizing Committee of IWWIP.....</b>	VI
<b>Program Committee.....</b>	VII
<b>Program Committee of IWWIP.....</b>	VIII
<b>List of Reviewers.....</b>	IX
<b>List of Reviewers for IWWIP .....</b>	XI

## Contributed Papers

### Intelligent Systems

<b>PARTICLE SWARM OPTIMIZATION ALGORITHMS FOR MINI-BENCHMARK PROBLEMS</b>	
PEN-CHEN CHOU, SAU-BOR HONG .....	1656
<b>A GENETIC-SEARCH MODEL FOR FIRST-DAY RETURNS USING IPO FUNDAMENTALS</b>	
CHIEN-FENG HUANG, CHIH-HSIANG CHANG, LI-MIN KUO, BO-HAU LIN, TSUNG-NAN HSIEH, BAO-RONG CHANG	1662
<b>FUNDUS PHASE CONGRUENCY BASED BIOMETRICS SYSTEM</b>	
M ISLAMUDDIN AHMED, BRUCE POON, MD JEWEL, M. ASHRAFUL AMIN, HONG YAN.....	1668
<b>DERMATOLOGICAL DISEASE DIAGNOSIS USING COLOR-SKIN IMAGES</b>	
M. SHAMSUL ARIFIN, M. GOLAM KIBRIA, ADNAN FIROZE, M. ASHRAFUL AMIN, HONG YAN.....	1675
<b>A STUDY OF APPLING BPNN TO ROBOT SPEECH INTERFACE</b>	
WAN-CHEN HUANG .....	1681
<b>DETECTING EMOTION MODEL IN E-LEARNING SYSTEM</b>	
GUEY-SHYA CHEN, MIN-FENG LEE.....	1686
<b>A POWER EFFICIENT DATA DISSEMINATION SCHEME FOR WIRELESS SENSOR NETWORKS WITH MOBILE SINKS</b>	
NENG-CHUNG WANG, YUNG-KUEI CHIANG, YOUNG-LONG CHEN .....	1692
<b>A HIGH PERFORMANCE ALGORITHM FOR PUZZLE RECONSTRUCTION PROBLEM</b>	
CHUN-WEI TSAI, SHIH-PANG TSENG, MING-CHAO CHIANG, CHU-SING YANG.....	1698
<b>THE APPROACH OF USING FRACTAL DIMENSION AND LINGUISTIC DESCRIPTORS IN CBIR</b>	
AN-ZEN SHIH.....	1704

<b>DESIGN A LOCATION-TIME BASED ETHNIC ADVERTISING RECOMMENDATION SYSTEM USING DEGREE OF MEMBERSHIPS</b>	
CHUN-YUAN LO, KUN-MING YU, WEN OUYANG, CHANG-HSING LEE .....	1708
<b>OPTION MONEYNESS CLASSIFICATION USING SUPPORT VECTOR MACHINE</b>	
CHIH-HUNG WU, YI-LIN TZENG, CHIH-CHAING LU, GWO-HSHIUNG TZENG .....	1715
<b>A MASHUP-BASED ADAPTIVE LEARNING SYSTEM</b>	
YI-HSING CHANG, YEN-YI CHEN .....	1721
<b>AN INTERSECTION-BASED COVERAGE ALGORITHM FOR PEGASIS ARCHITECTURE IN WIRELESS SENSOR NETWORKS</b>	
YOUNG-LONG CHEN, YU-CHENG LIN, NENG-CHUNG WANG .....	1727
<b>A SOUND-SOURCE LOCALIZATION SYSTEM USING THREE-MICROPHONE ARRAY AND CROSSPOWER SPECTRUM PHASE</b>	
HUNG-YAN GU, SHAN-SIANG YANG .....	1732
<b>INTELLIGENT SYSTEMS ON THE CLOUD FOR THE EARLY DETECTION OF CHRONIC KIDNEY DISEASE</b>	
RUEY-KEI CHIU, RENEE Y. CHEN, SHIN-AN WANG, SHENG-JEN JIAN .....	1737
<b>FAST EXEMPLAR-BASED IMAGE INPAINTING APPROACH</b>	
HUI-QIN WANG, QING CHEN, CHENG-HSIUNG HSIEH, PENG YU .....	1743
<b>A STACK-BASED MARKOV MODEL IN WEB PAGE NAVIGABILITY MEASURE</b>	
CHENG-TZU WANG, CHIH-CHUNG LO, AN-PANG CHANG, SHENG-KAI PAN .....	1748
<b>APPLYING LAYERED MULTI-POPULATION GENETIC PROGRAMMING ON LEARNING TO RANK FOR INFORMATION RETRIEVAL</b>	
JUNG YI LIN, JEN-YUAN YEH, CHAO-CHUNG LIU .....	1754
<b>CAMERA TAMPER DETECTION USING CODEBOOK MODEL FOR VIDEO SURVEILLANCE</b>	
CHUN-LIANG TUNG, PEI-LING TUNG, CHE-WEI KUO .....	1760
<b>BILINGUAL SPEECH BLOGGER SYSTEM BY INTEGRATING MOBILE CELLS AND GOOGLE MAP</b>	
FONG-LONG HUANG, MING-SHING YU, SIN-WEI LIN, ZHENG-YING LIU .....	1764
<b>A SOA-BASED INTELLIGENT SYSTEM FOR NURSE ROSTERING</b>	
CHIH-CHUNG LO, CHENG-TZU WANG, CHING-KUEI HUANG .....	1768
<b>APPLICATION OF GENETIC ALGORITHM COMBINING OPERATION TREE (GAOT) TO STREAM-WAY TRANSITION</b>	
KUAN-TING CHEN, CHANG-HUAN KOU, LI CHEN, SHIH-WEI MA .....	1774
<b>A NOVEL DSP BASED REAL TIME LICENSE PLATE DETECTION ALGORITHM</b>	
YUH-RAU WANG, WEI-HUNG LIN, LING YANG .....	1779
<b>COLOR TEMPERATURE COMPENSATION FOR LED LIGHTING ILLUMINATION</b>	
CHIA-TE CHOU, CHIA-LIANG LEE, CHANG-JUNG JUAN, TIEN-LU LIN, MING-JONG TSAI .....	1784
<b>AGING SIMULATION USING FACIAL MUSCLE MODEL</b>	
SHIHFENG D. LIN, CHIEN-HSUN TU, CHIH-YAO CHUANG, HUEI-TING LIN .....	1790
<b>DESIGN THE FRACTION OF NONCONFORMING CONTROL CHART WITH LEARNING CURVE CONSIDERATION</b>	
LING YANG .....	1796
<b>THE INTELLIGENT AGENTS IN THE STUDY OF WEB-BASED MEDICAL INFORMATION SEARCH SYSTEM</b>	
CHUN-JUNG LIN, YI-LING JHAO, SHOU-HSIUNG CHENG, WEN-NI YEH .....	1801
<b>SKIN COLOR DETECTION USING ARTIFICIAL IMMUNE NETWORKS</b>	
GUAN-CHUN LUH .....	1807
<b>AN EFFECTIVE TOOTH ISOLATION METHOD FOR BITEWING DENTAL X-RAY IMAGES</b>	
PO-WHEI HUANG, PHEN-LAN LIN, CHUN-HUNG KUO, Y. S. CHO .....	1814
<b>AN AUTOMATIC LESION DETECTION METHOD FOR DENTAL X-RAY IMAGES BY SEGMENTATION USING VARIATIONAL LEVEL SET</b>	
PHEN-LAN LIN, PO-YING HUANG, PO-WHEI HUANG .....	1821
<b>A NOVEL APPROACH FOR RE-AUTHENTICATION PROTOCOL USING PERSONALIZED INFORMATION</b>	
SZU-YU LIN, TE-EN WEI, HAHN-MING LEE, ALBERT B. JENG, CHIEN-TSUNG LIU .....	1826
<b>ANDROID PRIVACY</b>	
TE-EN WEI, ALBERT B. JENG, HAHN-MING LEE, CHIH-HOW CHEN, CHIN-WEI TIEN .....	1830
<b>ART-ENHANCED MODIFIED BINARY DIFFERENTIAL EVOLUTION ALGORITHM FOR OPTIMIZATION</b>	
CHUN-YIN WU, KUAN-SHIEN DU .....	1838
<b>A REAL-TIME LOCATION AND INFANT MONITORING SYSTEM BASED ON ACTIVE RFID</b>	
SHOU-HSIUNG CHENG, JUI-CHEN HUANG, CHUN-JUNG LIN .....	1844
<b>RESEARCH ON NEW GLASS PROTECTIVE SHIELD FOR MOBILE DEVICES</b>	
WEI-MING YEH .....	1850

<b>A NOVEL COMPOSITION FORECASTING MODEL BASED ON CHOQUET INTEGRAL WITH RESPECT TO Q-MEASURE</b>	
HSIANG-CHUAN LIU, SHIH-NENG WU, CHIH-HSIUNG SU, YEN-KUEI YU.....	1854
<b>AUTOMATED THEOREM FINDING BY FORWARD DEDUCTION BASED ON STRONG RELEVANT LOGIC: A CASE STUDY IN NBG SET THEORY</b>	
HONGBIAO GAO, KAI SHI, YUICHI GOTO, JINGDE CHENG .....	1859
<b>FORMAL ANALYSIS OF CRYPTOGRAPHIC PROTOCOLS BY REASONING BASED ON DEONTIC RELEVANT LOGIC: A CASE STUDY IN NEEDHAM-SCHROEDER SHARED-KEY PROTOCOL</b>	
KAZUNORI WAGATSUMA, YUICHI GOTO, JINGDE CHENG .....	1866
<b>EMPLOYING THE MULTIPLE CRITERIA DECISION MAKING METHODOLOGY TO IN-DEPTH DISCUSS THE POTENTIAL OF SOUTH AFRICA THROUGH THE EVALUATION OF TEN ECONOMIES</b>	
MING-YUAN HSIEH, CHUNG-HSING HUANG, CHAANG-YUNG KUNG, WEN-MING WU .....	1872
<b>PRACTICAL USAGE OF FREEENCAL: AN AUTOMATED FORWARD REASONING ENGINE FOR GENERAL-PURPOSE</b>	
YUICHI GOTO, HONGBIAO GAO, TAKAHIRO TSUJI, JINGDE CHENG .....	1878
<b>INFORMATION RETRIEVAL CONCERNING ATTITUDINAL AND MOTIVATIONAL ANTECEDENTS OF CONTRIBUTION CONCERNING WEB 2.0 ONLINE RESCUE ACTIVITIES BASED ON THE PervasivE IT EDUCATION</b>	
FEI-WEN HSIAO, HAI-CHENG CHU, SZU-WEI YANG, KUO-HSIUNG CHANG .....	1884

## Intelligent Systems with Applications

<b>RFID MEDICINE MANAGEMENT SYSTEM</b>	
HORNG-LIN SHIEH, SHIH-FONG LIN, WEN-SHENG CHANG .....	1890
<b>INTELLIGENT DOCUMENT PROCESSING SYSTEM FOR CONFERENCE ARTICLE</b>	
CHUN-MING TSAI .....	1895
<b>NON-MOTION BLUR DETECTION FOR HELPING BLIND PERSONS TO “SEE” BUSINESS CARDS</b>	
CHUN-MING TSAI .....	1901
<b>RESEARCH AND DEVELOPMENT OF LOCATION-BASED SYSTEM</b>	
PO-LUN CHANG, FEI-HU HSIEH, I-TA TSAI .....	1907
<b>STUDY ON DYNAMIC PHENOMENA IN VOLTAGE-MODE CONTROLLED SINGLE-PHASE HALF-BRIDGE INVERTERS</b>	
FEI-HU HSIEH, HEN-KUNG WANG, PO-LUN CHANG, HSUAN-CHIANG WU .....	1913
<b>A SUICIDE CASE INFORMATION SERVICE PLATFORM FOR CLINICAL STAFF</b>	
CHIEN-NAN LEE, YI-HSING HO .....	1921
<b>A HOMECARE SERVICE PLATFORM FOR MOBILE HEALTHCARE</b>	
CHIEN-NAN LEE .....	1927
<b>AN EMERGENCY MEDICAL SERVICE SUPPORT SYSTEM FOR PATIENTS IN RURAL AREAS - AN EXAMPLE FROM TAIWAN</b>	
LI-LIN CHEN .....	1931
<b>FUNCTION APPROXIMATION OF NONLINEAR FUNCTIONS BY GA-BASED FUZZY SYSTEMS</b>	
HUNG-CHING LU, SING-FU LEE .....	1936
<b>MODELING FRAGMENT COMING DOWN CURVES USING PULSE RESPONSE SEQUENCE ALGORITHM</b>	
FENG-JIH WU, LI-MING CHEN, JEN-TSAN KUAN, CHIH-JU CHOU, YING LU .....	1942
<b>THE ANALYSIS OF REGENERATIVE BREAKING POWER FOR TAIPEI RAPID TRANSIT SYSTEMS ELECTRICAL MULTIPLE UNITS</b>	
KUO-HSIUNG TSENG, YONG-FONG SHIAO .....	1947
<b>USING DATA MINING TO DISSOLVED GAS ANALYSIS FOR POWER TRANSFORMER FAULT DIAGNOSIS</b>	
CHIH-HSUAN LIU, TAI-LI CHEN, LEEH-TER YAO, SHUN-YUAN WANG .....	1952
<b>DISCRIMINATION OF FAILURE CONDITION FOR WIND TURBINES BY SUBTRACTIVE CLUSTERING</b>	
CHENG-CHIEN KUO .....	1958

## International Workshop on Web Information Processing

<b>AN EMPIRICAL STUDY ON QUERY EXPANSION AND DOCUMENT EXPANSION IN INFORMATION RETRIEVAL</b>	
XU-WEI LI, MU-YUN YANG, HAO-LIANG QI, SHENG LI, ZHONG-YUAN HAN .....	1963
<b>DETECTING HOT TOPICS IN TECHNOLOGY NEWS STREAMS</b>	
BO YOU, MING LIU, BING-QUAN LIU, XIAO-LONG WANG .....	1968

<b>MINING TEXTUAL-FEATURE BASED RESEARCH ON TRANSLATOR'S STYLES</b>	1975
JING-HUI REN, LI-XIN WANG .....	
<b>APPLICATION ON WEB MINING FOR WEB USABILITY ANALYSIS</b>	
JIAN-LI DUAN, SHU-XIA LIU .....	1981
<b>TIME EXPRESSION NORMALIZATION BASED ON MULTI-SCALE CLASSIFICATION AND TEMPORAL FOCUS MODEL WITH HIERARCHICAL DISCOURSE TRANSFER</b>	
RUI-FANG HE, QIAN-LI MA.....	1986
<b>RESEARCH ON SENTIMENT ORIENTATION OF PRODUCT REVIEWS IN CHINESE BASED ON CASCADED CRFS MODELS</b>	
SHENG-CHUN DING, TING JIANG, NENG WEN.....	1993
<b>AUTOMATED QUALITY ASSESSMENT OF WEB PAGES FROM TEXTUAL CONTENT</b>	
XIAO-LIN WANG, HAI ZHAO, BAO-LIANG LU.....	2000
<b>WORD SENTIMENT POLARITY DISAMBIGUITATION BASED ON OPINION LEVEL CONTEXT</b>	
HUAN ZHAO, YUN-QING XIA, RAYMOND Y.K. LAU, YI LIU .....	2007
<b>A NOVEL FRAUDULENT TRANSACTION DETECTION MODEL FOR ENHANCED REPUTATION MANAGEMENT AT E-MARKETS</b>	
LONG SONG, RAYMOND Y.K. LAU, YUN-QING XIA.....	2013
<b>EMOTION PREDICTION OF NEWS ARTICLES FROM READER'S PERSPECTIVE BASED ON MULTI-LABEL CLASSIFICATION</b>	
LU YE, RUI-FENG XU, JUN XU .....	2019
<b>LANGUAGE MODEL BASED CHINESE FINANCIAL NEWS SENTIMENT CLASSIFICATION</b>	
JUN XU, RUI-FENG XU, XIAO-LONG WANG.....	2025
<b>EXPLORING MULTIPLE FEATURES FOR SENSE PREDICTION OF CHINESE UNKNOWN WORDS</b>	
CHAO-YUE WANG, YAN-QING ZHAO, GUO-HONG FU .....	2031
<b>METHOD OF TAGS RECOMMENDATION FOR BLOGS: A COMPARATIVE STUDY</b>	
LI-JUAN TANG, CHENG-ZHI ZHANG .....	2037
<b>COMPUTATION OF BILINGUAL WORD SIMILARITIES BY METAPHORICAL PROPERTIES</b>	
HAI-BO KUANG, BIN LI, CHEN CHEN, PENG JIN, XIAO-HE CHEN .....	2041
<b>F-SCORE-LIKE MEASURE: A NEW MEASURE FOR SPAM FILTERING</b>	
YONG HAN, HAO-LIANG QI, MU-YUN YANG .....	2047