

# **2010 IEEE Fifth International Conference on Bio-Inspired Computing: Theories and Applications**

**(BIC-TA 2010)**

**Changsha, China  
23 – 26 September 2010**

**Volume 1  
Pages 1-850**



**IEEE Catalog Number: CFP1001F-PRT  
ISBN: 978-1-4244-6437-1**

# TABLE OF CONTENTS

## Volume-1

001-01002	<b>A STRATIFIED IMAGE-HIDING METHOD BASED ON CHAOS</b> <i>Ying Li</i>	<b>1</b>
002-01003	<b>GLOBAL EXPONENTIAL STABILITY OF MAM NEURAL NETWORK WITH TIME DELAYS</b> <i>Tiejun Zhou</i>	<b>6</b>
003-01004	<b>INSIGHTS INTO THE COMBINATORIAL EFFECTS OF HISTONE MODIFICATIONS IN YEAST USING ASSOCIATION RULE MINING</b> <i>Jiang Wang</i>	<b>11</b>
004-01005	<b><math>H^\infty</math> CONTROL FOR NEUTRAL LINEAR STOCHASTIC TIME-DELAY SYSTEMS VIA DELAY FEEDBACK CONTROLLER</b> <i>Guici Chen</i>	<b>16</b>
005-01007	<b>INVERSE SYNCHRONIZATION OF DIFFERENT CHAOTIC NEURAL NETWORKS WITH MIXED DELAYS</b> <i>Haiyan Xie</i>	<b>21</b>
006-01008	<b>VARIABLE STRUCTURE FUZZY-PI CONTROL FOR STRATEGY OF MAXIMAL WIND ENERGY CAPTURE AND CONVERSION OF DOUBLY FED INDUCTION GENERATORS</b> <i>Lepeng Song</i>	<b>26</b>
007-01011	<b>SELECTION OF PARAMETERS FOR PHASE SPACE RECONSTRUCTION OF CHAOTIC TIME SERIES</b> <i>Yibin Li</i>	<b>30</b>
008-01014	<b>A NETWORK COMPARISON ALGORITHM FOR PREDICTING THE CONSERVATIVE INTERACTION REGIONS IN PROTEIN-PROTEIN INTERACTION NETWORK</b> <i>Lihong Peng</i>	<b>34</b>
009-01015	<b>SYNCHRONIZATION OF STOCHASTIC DYNAMICAL NETWORKS WITH GENERAL COUPLING</b> <i>Cong Zheng</i>	<b>40</b>
010-01016	<b>SIMULATION RUN ALLOCATION FOR OPTIMIZATION OF ORDER-UP-TO LEVEL CONFIGURATION IN A COMPLEX LOGISTICS</b> <i>Weifeng Zhu</i>	<b>46</b>
011-01017	<b>DETECTING DENSE SUBGRAPHS IN COMPLEX NETWORKS BASED ON EDGE DENSITY COEFFICIENT</b> <i>Hang Zhang</i>	<b>51</b>
012-01018	<b>VISUAL SIMULATION FRAMEWORK OF IRON AND STEEL PRODUCTION SCHEDULING BASED ON FLEXSIM</b> <i>Liufang Yao</i>	<b>54</b>
013-01019	<b>A NEW SIMULATION ALGORITHM FOR MULTIENVIRONMENT</b>	<b>59</b>

**PROBABILISTIC P SYSTEMS**

*M.A. Martínez-del-Amor*

014-01021	<b>IMPROVED DEPTH FIRST ALGORITHM AND ITS APPLICATION IN INFORMATION RETRIEVAL</b>	<b>69</b>
	<i>Xiong Jianbin</i>	
015-01022	<b>AN ALGORITHM FOR EXTRACTING SUBGRAPH OF SPECIFIC SPECIES FROM METABOLIC PATHWAY</b>	<b>74</b>
	<i>ZHAO Jian-Bang</i>	
016-01023	<b>RESEARCH ON IDENTIFICATION ALGORITHM OF HAMMERSTEIN MODEL</b>	<b>80</b>
	<i>Feng Wang</i>	
017-01024	<b>AN OUTLIER MINING ALGORITHM BASED ON CHARACTERISTIC ATTRIBUTE SUBSPACE</b>	<b>86</b>
	<i>Aiqin Liu</i>	
018-01025	<b>THE STUDY OF PRE-PROCESSING METHOD OF BRAIN VESSEL SEGMENTATION BASED ON PARAMETERIZED STATISTICAL MODEL</b>	<b>90</b>
	<i>Xingce Wang</i>	
019-01026	<b>NHDCOM: NODE HETEROGENEOUS DEGREE-BASED CONSISTENCY MAINTENANCE METHOD FOR UNSTRUCTURED P2P SYSTEMS</b>	<b>95</b>
	<i>Lei Yang</i>	
020-01027	<b>RESEARCH ON THE APPLICATION OF MEDICAL-METEOROLOGICAL FORECAST MODEL OF INFECTIOUS DIARRHOEA DISEASE IN BEIJING</b>	<b>100</b>
	<i>Zhao Na</i>	
021-01029	<b>THE BIFURCATION ANALYSIS AND CHAOS ANTI-CONTROL OF A DIFFERENTIAL-ALGEBRAIC SYSTEM</b>	<b>104</b>
	<i>Hong Niu</i>	
022-01030	<b>PROPERTIES OF 2X2 GAME BASED ON GENETIC ALGORITHM</b>	<b>109</b>
	<i>Tao Wang</i>	
023-01031	<b>PERMANENCE FOR A PREDATOR-PREY MODEL WITH SCHENK FUNCTIONAL RESPONSE</b>	<b>114</b>
	<i>Minling Zhong</i>	
024-02002	<b>PERCEPTUAL NEAREST NEIGHBORS FOR CLASSIFICATION</b>	<b>118</b>
	<i>Wen Guihua</i>	
025-02003	<b>NEURAL ENCODING BASED ON FREQUENCY STATES USING MULTI-SPIKE TRAIN DATA</b>	<b>123</b>
	<i>Fanxing Hu</i>	
026-02006	<b>A DYNAMICAL POLICY SEARCH MODEL FOR MATCHING LAW</b>	<b>127</b>
	<i>Cheng Zhenbo</i>	

027-03002	<b>IMAGE ENCRYPTION ALGORITHM BASED ON DNA BIOLOGICAL PROPERTIES AND CHAOTIC SYSTEMS</b> <i>Qian Wang</i>	132
028-03004	<b>THE APPLICATION OF FIXED-LENGTH THREE DNA SEGMENTS ENCODING TO MAXIMUM FLOW PROBLEM</b> <i>Zhou Kang</i>	137
029-03005	<b>A DNA ALGORITHM FOR MAXIMAL MATCHING PROBLEM</b> <i>Xiao Ding</i>	143
030-03006	<b>PLASMID DNA COMPUTING MODEL OF 0-1 PROGRAMMING PROBLEM</b> <i>Yin zhixiang</i>	148
031-03007	<b>A NOVEL METHOD OF RECOGNIZING SHORT CODING SEQUENCES OF HUMAN GENES</b> <i>Jiawei Luo</i>	152
032-03008	<b>A NOVEL NON-DEGENERATE 2D GRAPHICAL REPRESENTATION AND NUMERICAL CHARACTERIZATION OF DNA SEQUENCES</b> <i>Shaohong Zhong</i>	157
033-03009	<b>AN EM METHOD BASED ON ENTROPY LD BLOCK PARTITION FOR HAPLOTYPE INFERENCE</b> <i>Yun Xu</i>	163
034-03010	<b>DNA SEQUENCE GENERATION ALGORITHM USING DNA CODING METHOD FOR 0/1 KNAPSACK PROBLEM</b> <i>Eungyeong Kim</i>	168
035-03011	<b>USER AUTHORIZATION QUERIES IN RBAC SYSTEMS BASED ON DNA COMPUTATION</b> <i>Zhuo Tang</i>	174
036-03013	<b>DNA TILE ASSEMBLY MODEL FOR 0-1 KNAPSACK PROBLEM</b> <i>Yanfeng Wang</i>	180
037-03014	<b>A NOVEL SOLUTION FOR THE P2P NETWORK OBSERVER PLACEMENT PROBLEM ON DNA-BASED SUPERCOMPUTING</b> <i>GuangXue Yue</i>	185
038-03015	<b>A NOVEL AND FAST PARALLEL SOLUTION FOR THE VERTEX COVER PROBLEM ON DNA-BASED SUPERCOMPUTING</b> <i>Zhou Xu</i>	190
039-03016	<b>DNA BASED ALGORITHMS FOR SOLVING BOTH MAX-SAT AND MAX-W-SAT PROBLEMS</b> <i>Souhila Sadeg</i>	195
040-03017	<b>DNA SOLUTION BASED ON TRIANGLE SUBGRAPH TO THE VERTEX COVER PROBLEM</b>	200

	<i>Aili Han</i>		
041-03019	<b>A DNA SEQUENCE DISTANCE MEASURE APPROACH FOR PHYLOGENETIC TREE CONSTRUCTION</b>	<b>204</b>	
	<i>Dan Wei</i>		
042-03020	<b>CONSTRUCTING MOLECULAR PARALLEL SUBTRACTOR AND MODULAR WITH BASIC BIO-LOGIC OPERATIONS IN THE ADLEMAN-LIPATION MODEL</b>	<b>213</b>	
	<i>Michael Shan-Hui Ho</i>		
043-03021	<b>AN HMM-BASED HIERARCHICAL CLUSTERING METHOD FOR GENE EXPRESSION TIME SERIES DATA</b>	<b>219</b>	
	<i>Guoqing Zhao</i>		
044-03022	<b>AN <math>O(1.414N)</math> VOLUME MOLECULAR SOLUTION FOR THE 0-1 KNAPSACK PROBLEM ON DNA-BASED SUPERCOMPUTING</b>	<b>223</b>	
	<i>Yong Jiang</i>		
045-03025	<b>A PARALLEL TYPE OF DNA COMPUTING MODEL FOR GRAPH VERTEX COLORING PROBLEM</b>	<b>231</b>	
	<i>Jin Xu</i>		
046-03027	<b>IMPROVED MOLECULAR SOLUTIONS FOR THE N-QUEEN PROBLEM ON DNA-BASED SUPERCOMPUTING</b>	<b>236</b>	
	<i>Fan Wu</i>		
047-04002	<b>SUPPLIER SELECTION MODEL AND ITS ALGORITHM CONSIDERING MULTI-PERIOD PRICE REBATE</b>	<b>241</b>	
	<i>Xuelian Wang</i>		
048-04003	<b>EMPIRICAL STUDY OF THE RANDOM NUMBER PARAMETER SETTING FOR PARTICLE SWARM OPTIMIZATION ALGORITHM</b>	<b>246</b>	
	<i>Zhixiong Liu</i>		
049-04010	<b>2ND PCA ON 3D PROTEIN STRUCTURE SIMILARITY</b>	<b>253</b>	
	<i>Yan Chen, Shan Chang</i>		
050-04011	<b>A GENETIC ALGORITHM FOR CONSTRUCTION OF RECOGNIZERS OF ANOMALIES IN THE BEHAVIOUR OF DYNAMICAL SYSTEMS</b>	<b>258</b>	
	<i>Dmitry S. Kovalenko</i>		
051-04013	<b>UNSUPERVISED FEATURE SELECTION BASED ON CLUSTERING</b>	<b>263</b>	
	<i>Shengyi Jiang</i>		
052-04014	<b>MLGA: A MULTILEVEL COOPERATIVE GENETIC ALGORITHM</b>	<b>271</b>	
	<i>Reza Akbari</i>		
053-04015	<b>QUICK SERVICE SELECTION APPROACH BASED ON PARTICLE SWARM OPTIMIZATION</b>	<b>278</b>	
	<i>Qibo Sun</i>		
054-04017	<b>A SWEEP-HEURISTIC ALGORITHM COMBINED WITH PARTITION OF</b>	<b>285</b>	

	<b>TIME AND DISTRICT FOR LARGE-SCALE VEHICLE ROUTING AND SCHEDULING PROBLEM OF PICKUP AND DELIVERY OF CUSTOMERS TO AIRPORT</b>	
	<i>Bingxing Liu</i>	
055-04019	<b>CLUSTERING RESEARCH OF HANDWRITTEN DIGIT RECOGNITION BY GENETIC ALGORITHM</b>	<b>291</b>
	<i>Xu Ye</i>	
056-04020	<b>BIN PACKING/COVERING WITH DELIVERY SOLVED WITH THE EVOLUTION OF ALGORITHMS</b>	<b>298</b>
	<i>Attila Benk<sup>1/2</sup> o</i>	
057-04021	<b>IMPLEMENTAL TECHNIQUES AND THEIR EFFECTIVES FOR EVOLUTIONARY ALGORITHMS USED TO SOLVE MULTILEVEL LOT SIZING PROBLEMS</b>	<b>303</b>
	<i>Ikou Kaku</i>	
058-04022	<b>ON STOCK PREDICTION BASED ON KNN-ANN ALGORITHM</b>	<b>310</b>
	<i>Sanhong Liu</i>	
059-04023	<b>CONTINUOUS QUANTUM ANT COLONY OPTIMIZATION AND ITS APPLICATION TO OPTIMIZATION AND ANALYSIS OF INDUCTION MOTOR STRUCTURE</b>	<b>313</b>
	<i>Weili Li</i>	
060-04024	<b>ANT COLONY ALGORITHM TO RELIABILITY OPTIMIZATION IN COMPLEX SYSTEM</b>	<b>318</b>
	<i>Shi-Juan CHENG</i>	
061-04026	<b>A DYNAMIC MULTI-SWARM PARTICLE SWARM OPTIMIZER FOR BLOCKING FLOW SHOP SCHEDULING</b>	<b>323</b>
	<i>J. J. Liang</i>	
062-04027	<b>A HYBRID STRATEGY BASED ON NICHE GENETIC ALGORITHM AND TABU SEARCH AND ITS CONVERGENCE PROPERTY</b>	<b>328</b>
	<i>Zhiyong Li</i>	
063-04028	<b>A MUTATION HYBRID ALGORITHM OF PARTICLE SWARM OPTIMIZATION</b>	<b>333</b>
	<i>Ye Qingwei</i>	
064-04029	<b>ARTIFICIAL BEE COLONY ALGORITHM FOR SOLVING MULTIPLE SEQUENCE ALIGNMENT</b>	<b>337</b>
	<i>Xiujuan Lei</i>	
065-04030	<b>THE VEHICLE ROUTING AND SCHEDULING BEST BALANCE MODEL AND ALGORITHM FOR FREE PICKUP AND DELIVERY SERVICE IN FLIGHT TICKET SALES COMPANIES</b>	<b>343</b>
	<i>Xi Xia Cao</i>	
066-04031	<b>THE DUPLICATED OF PARTIAL CONTENT DETECTION BASED ON</b>	<b>350</b>

	<b>PSO</b>	
	<i>Ye Qingwei</i>	
067-04032	<b>THE OPTIMIZED ESTIMATION OF IMPULSE RESPONSE FUNCTION USING PSO</b>	<b>354</b>
	<i>Zhou Yu</i>	
068-04033	<b>A KNOWLEDGE-BASED DECISION MAKING TOOL IN COMPETITIVE ENVIRONMENTS</b>	<b>359</b>
	<i>Qing Zhou</i>	
069-04036	<b>UNION-INTERSECTION ANT SYSTEM</b>	<b>364</b>
	<i>Jinbiao Wang</i>	
070-04037	<b>NOVEL OBJECTIVE-SPACE-DIVIDING MULTI-OBJECTIVES EVOLUTIONARY ALGORITHM AND ITS CONVERGENCE PROPERTY</b>	<b>372</b>
	<i>Zhiyong Li</i>	
071-04038	<b>ENHANCING MOEA WITH COMPONENT-EMPHASIZING MECHANISM FOR MULTI-OBJECTIVE OPTIMIZATION</b>	<b>380</b>
	<i>Song Yang</i>	
072-04040	<b>HYBRID MODEL PREDICTIVE CONTROL BASED ON MODIFIED PARTICLE SWARM OPTIMIZATION</b>	<b>385</b>
	<i>Degui Xiao</i>	
073-04041	<b>AN IMPROVED HARMONY SEARCH ALGORITHM FOR MULTI-DIMENSIONAL FUNCTION OPTIMIZATION PROBLEM</b>	<b>391</b>
	<i>Wen-Juan REN</i>	
074-04043	<b>THE AXIAL POSITION SENSING AND SIGNAL PROCESSING IN MAGLEV ARTIFICIAL HEART PUMP</b>	<b>396</b>
	<i>Yunpeng Zhang</i>	
075-04044	<b>A COMPETITIVE CO-EVOLUTIONARY CULTURAL DIFFERENTIAL EVOLUTION AND ITS APPLICATION TO CONSTRAINED OPTIMIZATION IN BUTANE ALKYLATION PROCESS</b>	<b>401</b>
	<i>Wei Xu</i>	
076-04046	<b>EVOLUTIONARY GENERATION OF TEST DATA FOR MULTIPLE PATHS COVERAGE WITH FAULTS DETECTION</b>	<b>406</b>
	<i>Yan Zhang</i>	
077-04047	<b>EVOLUTIONARY ALGORITHMS FOR MULTI-OBJECTIVE OPTIMIZATION PROBLEMS WITH INTERVAL PARAMETERS</b>	<b>411</b>
	<i>Dun-wei Gong</i>	
078-04049	<b>JOB-SHOP SCHEDULING PROBLEM WITH MULTIPLE PROCESS ROUTES CONSIDERING LOT SPLIT AND SETUP TIME</b>	<b>421</b>
	<i>Xu Shaotan</i>	
079-04050	<b>MULTI-OBJECTIVE DISASSEMBLY LINE BALANCING VIA MODIFIED</b>	<b>426</b>

	<b>ANT COLONY OPTIMIZATION ALGORITHM</b>	
	<i>Liping DING</i>	
080-04051	<b>MODELLING GENE REGULATORY NETWORK BY FRACTIONAL ORDER DIFFERENTIAL EQUATIONS</b>	<b>431</b>
	<i>Ruirui Ji</i>	
081-04052	<b>A HYBRID DISCRETE HARMONY SEARCH ALGORITHM FOR BLOCKING FLOW SHOP SCHEDULING</b>	<b>435</b>
	<i>Yu-Yan Han</i>	
082-04053	<b>AN IMPROVED GENETIC ALGORITHM FOR WIRELESS SENSOR NETWORKS LOCALIZATION</b>	<b>439</b>
	<i>Gao Yang</i>	
083-04055	<b>USING LOGIC RULES FOR CONCEPT REFINEMENT LEARNING IN FIRST ORDER LOGIC</b>	<b>444</b>
	<i>Zhenguo Shi</i>	
084-04056	<b>TABU SEARCH ALGORITHM FOR SOLVING NO-IDLE PERMUTATION FLOW SHOP SCHEDULING PROBLEM</b>	<b>449</b>
	<i>Wen-Juan REN</i>	
085-04059	<b>OPTIMAL RESERVOIR OPERATION USING A HYBRID SIMULATED ANNEALING ALGORITHM-GENETIC ALGORITHM</b>	<b>454</b>
	<i>Yong-yong ZHANG</i>	
086-04060	<b>IMPROVED BEES ALGORITHM FOR THE LARGE-SCALE LAYOUT OPTIMIZATION WITHOUT PERFORMANCE CONSTRAINTS</b>	<b>459</b>
	<i>Huanzhe Li</i>	
087-04061	<b>AN IMPROVED EVOLUTIONARY MULTI-OBJECTIVE OPTIMIZATION METHOD</b>	<b>464</b>
	<i>Yuan Cao</i>	
088-04064	<b>BIO-INSPIRED AUTOMATIC SHAPE FORMATION FOR SWARMS OF SELF-RECONFIGURABLE MODULAR ROBOTS</b>	<b>469</b>
	<i>Kiwon Yeom</i>	
089-04065	<b>A SMOOTHING EVOLUTIONARY ALGORITHM BASED ON SQUARE SEARCH AND FILLED FUNCTION FOR GLOBAL OPTIMIZATION</b>	<b>477</b>
	<i>Lei Fan</i>	
090-04068	<b>USING PSO TO IMPROVE DYNAMIC PROGRAMMING BASED ALGORITHM FOR BREAST MASS SEGMENTATION</b>	<b>485</b>
	<i>Xiangyang Xu</i>	
091-04069	<b>AN ELECTROMAGNETISM-LIKE METAHEURISTIC FOR SEQUENCE DEPENDENT OPEN SHOP SCHEDULING</b>	<b>489</b>
	<i>B. Naderi</i>	
092-04070	<b>MIGRATING WORKFLOW PROCESS FRAGMENTATION BASED ON</b>	<b>498</b>



	<b>COST CONSTRAINT AND BALANCED GRANULARITY</b>	
	<i>Jie Cheng</i>	
093-04072	<b>A KIND OF SERVICE-AWARE COMPUTING METHOD FOR WEB-BASED MOBILE APPLICATION WITH UNCERTAINTY</b>	<b>504</b>
	<i>De-gan Zhang</i>	
094-04073	<b>ARTIFICIAL MORPHOGENESIS FOR ARBITRARY SHAPE GENERATION OF SWARMS OF MULTI AGENTS</b>	<b>509</b>
	<i>Kiwon Yeom</i>	
095-04077	<b>IMPROVED ARTIFICIAL BEE COLONY ALGORITHM AND ITS APPLICATION IN DATA CLUSTERING</b>	<b>514</b>
	<i>Xiujuan Lei</i>	
096-04080	<b>PARTICLE SWARM HYBRIDIZE WITH GAUSSIAN PROCESS REGRESSION FOR DISPLACEMENT PREDICTION</b>	<b>522</b>
	<i>Fuwei Zhu</i>	
097-04082	<b>IMPROVED DIFFERENTIAL EVOLUTION ALGORITHM USED FOR LOAD DISTRIBUTION OF HOT STRIP ROLLING</b>	<b>526</b>
	<i>Yao Feng</i>	
098-04083	<b>HYBRIDIZATION OF PARTICLE SWARM OPTIMIZATION WITH THE K-MEANS ALGORITHM FOR CLUSTERING ANALYSIS</b>	<b>531</b>
	<i>Hai Shen</i>	
099-04085	<b>NOVEL DYNAMIC DIVERSITY CONTROLLING EDA AND ITS APPLICATION TO AUTOMATED BILATERAL NEGOTIATION</b>	<b>536</b>
	<i>Jeonghwan Gwak, Kwang Mong Sim</i>	
100-04086	<b>A NOVEL HYBRID IMMUNE ALGORITHM AND ITS CONVERGENCE</b>	<b>545</b>
	<i>A.L Zhang</i>	
101-04087	<b>SPECTRUM DETECTION MODEL FOR COGNITIVE RADIO NETWORKS</b>	<b>551</b>
	<i>Yi-bing Li</i>	
102-04090	<b>APPLICATION OF ARTIFICIAL FISH SCHOOL ALGORITHM IN UCAV PATH PLANNING</b>	<b>555</b>
	<i>Qianzhi Ma</i>	
103-04093	<b>AN INSTANCES SAMPLING APPROACH BASED ON CELLULAR AUTOMATA FOR ENSEMBLE LEARNING</b>	<b>560</b>
	<i>Fang Min</i>	
104-04094	<b>IMPROVING BINARY ANT COLONY OPTIMIZATION BY ADAPTIVE PHEROMONE AND COMMUTATIVE SOLUTION UPDATE</b>	<b>565</b>
	<i>Kun Wei</i>	
105-04096	<b>DISTRIBUTIONAL CHARACTERISTICS OF URBAN THERMAL SPACE OF CHONGQING CITY</b>	<b>570</b>

*Jin-hong XU*

106-04103	<b>PARALLEL FUZZY RULE LEARNING USING AN ACO-BASED ALGORITHM FOR MEDICAL DATA MINING</b>	<b>573</b>
	<i>Mostafa Fathi Ganji</i>	
107-04104	<b>ARTIFICIAL IMMUNE CONTROLLER FOR PMSM SPEED REGULATION SYSTEM</b>	<b>582</b>
	<i>Gang Liu</i>	
108-05001	<b>KNOWLEDGE REPRESENTATION USING FUZZY SPIKING NEURAL P SYSTEM</b>	<b>586</b>
	<i>Tao Wang</i>	
109-05002	<b>TIMED SPIKING NEURAL P SYSTEMS</b>	<b>591</b>
	<i>Hong Peng</i>	
110-05003	<b>DIVERSITY AND CONVERGENCE ANALYSIS OF MEMBRANE ALGORITHMS</b>	<b>596</b>
	<i>Gexiang Zhang</i>	
111-05004	<b>A MULTI-OBJECTIVE MEMBRANE ALGORITHM FOR KNAPSACK PROBLEMS</b>	<b>604</b>
	<i>Gexiang Zhang</i>	
112-05005	<b>SOLVING SUDOKU WITH MEMBRANE COMPUTING</b>	<b>610</b>
	<i>Daniel D'iaz-Pernil</i>	
113-05006	<b>A UNIFORM FRAMEWORK FOR MODELLING BASED ON P SYSTEMS</b>	<b>616</b>
	<i>MaAngels Colomer Cugat</i>	
114-05007	<b>SMALL UNIVERSAL ASYNCHRONOUS SPIKING NEURAL P SYSTEMS</b>	<b>622</b>
	<i>Linqiang Pan</i>	
115-05008	<b>MEMBRANE COMPUTING BASED PARTICLE SWARM OPTIMIZATION ALGORITHM AND ITS APPLICATION</b>	<b>631</b>
	<i>Yang Sun</i>	
116-05009	<b>MECOSIM: A GENERAL PURPOSE SOFTWARE TOOL FOR SIMULATING BIOLOGICAL PHENOMENA BY MEANS OF P SYSTEMS</b>	<b>637</b>
	<i>I. P'erez-Hurtado</i>	
117-05011	<b>SYMPORT/ANTIPOINT P SYSTEMS WITH LOOK-AHEAD MODE</b>	<b>644</b>
	<i>Yun Jiang</i>	
118-06001	<b>SELF-BRANCHING COMPETITIVE LEARNING FOR IMAGE SEGMENTATION</b>	<b>652</b>
	<i>Tao Guan</i>	
119-06002	<b>A NEW IMAGE CODING SCHEME BASED UPON SELF ORGANIZING MAPS</b>	<b>657</b>
	<i>Hongsong Li</i>	

120-06003	<b>SLIDING MODE CONTROL BASED ON NEURAL NETWORK FOR GIANT MAGNETOSTRICTIVE SMART COMPONENT</b> <i>Xiaomei Sui</i>	661
121-06004	<b>NEURAL NETWORK MODELING ON EVOLUTION OF HYDRATION REACTION FOR PORTLAND CEMENT</b> <i>Lin Wang</i>	664
122-06007	<b>MULTI-STEPS PREDICTION OF CHAOTIC TIME SERIES BASED ON ECHO STATE NETWORK</b> <i>Yong Song</i>	669
123-06008	<b>OPTIMIZATION ON GA-BP NEURAL NETWORK OF COAL AND GAS OUTBURST HAZARD PREDICTION</b> <i>Bo Wu</i>	673
124-06009	<b>TRAINING NEURAL NETWORKS BY ELECTROMAGNETISM-LIKE MECHANISM ALGORITHM FOR TOURISM ARRIVALS FORECASTING</b> <i>Qing Wu</i>	679
125-06010	<b>A STUDY FOR KERNEL HETEROSCEDASTIC DISCRIMINANT ANALYSIS IN FACE RECOGNITION</b> <i>Jun-Ying Gan</i>	689
126-06011	<b>A NOVEL ENCRYPTION ALGORITHM BASED ON ATTRACTOR COMPUTATION FOR WIRELESS SENSOR NETWORK</b> <i>Tongtong Xue</i>	693
127-06012	<b>CHAOTIC NEURAL NETWORKS WITH GAUSS WAVELET SELF FEEDBACK AND THEIR APPLICATIONS TO OPTIMIZATION</b> <i>Hongbin Zhao</i>	698
128-06013	<b>A HYBRID GENETIC ALGORITHM FOR 3D BIN PACKING PROBLEMS</b> <i>Hongfeng Wang</i>	703
129-06014	<b>ONE IMPROVED GENETIC ALGORITHM APPLIED IN THE PROBLEM OF DYNAMIC JAMMING RESOURCE SCHEDULING WITH MULTI-OBJECTIVE AND MULTI-CONSTRAINT</b> <i>Y.Xue</i>	708
130-06017	<b>THE FUNCTION OF PERIGLOMERULAR CELLS ON OLFACTORY CODING IN A DETAILED ELECTROPHYSIOLOGICAL MODEL OF VERTEBRATE OLFACTORY BULB</b> <i>Xuesong Ye</i>	713
131-06018	<b>EASY VERIFIABLE SUFFICIENT CONDITIONS FOR EXISTENCE AND EXPONENTIAL STABILITY OF PERIODIC SOLUTION FOR DELAY CELLULAR NEURAL NETWORKS</b> <i>Zhihui Yang</i>	722
132-06019	<b>ONLINE ESTIMATING VOLTAGE SOURCE INVERTER NONLINEARITY FOR PMSM BY ADALINE NEURAL NETWORK</b>	727

	<i>Haitao Qin</i>	
133-06020	<b>A NEW WELL LOG INTERPRETATION MODEL BASED ON EMERGENT SELF-ORGANIZING MAPS</b> <i>GAO Rong-fang</i>	734
134-06024	<b>PARTITIONED FEATURE-BASED CLASSIFIER MODEL WITH EXPERTISE TABLE</b> <i>Dong-Chul Park</i>	737
135-06025	<b>THE COMBINING PREDICTION OF THE RMB EXCHANGE RATE SERIES BASED ON DIVERSE ARCHITECTURAL ARTIFICIAL NEURAL NETWORK ENSEMBLE METHODOLOGY</b> <i>Bo Sun</i>	743
136-06026	<b>WAVELET ANALYSIS BASED SPARSE LS-SVR FOR TIME SERIES DATA</b> <i>Feng Chen</i>	750
137-06027	<b>A NEURAL NETWORK MODEL FOR POWER SYSTEM INTER-HARMONICS ESTIMATION</b> <i>Xiu-chun Xiao</i>	756
138-06029	<b>REMOTE SENSING IMAGES CLASSIFICATION USING FUZZY-ROUGH NEURAL NETWORK</b> <i>Mao Jianxu</i>	761
139-06062	<b>MULTI-PARAMETER ESTIMATION OF NON-SALIENT POLE PERMANENT MAGNET SYNCHRONOUS MACHINES BY USING EVOLUTIONARY ALGORITHMS</b> <i>Kan Liu</i>	766
140-07003	<b>IDENTIFICATION OF CODING AND NON-CODING SEQUENCES IN A COMPLETE GENOME USING LOCAL HOLDER EXPONENT FORMALISM AND MULTI-AFFINITY ANALYSIS</b> <i>Xiaochun Li</i>	775
141-07004	<b>A PERCEPTION ALGORITHM FOR DISCERNING NON-LINEARITY</b> <i>Li Guo-liang</i>	783
142-07005	<b>DIGITAL IMAGE WATERMARKING ROBUST TO GEOMETRIC ATTACKS BASED ON WAVELET DOMAIN</b> <i>Na Ma</i>	787
143-07007	<b>A NEW MULTI-OBJECTIVE PORTFOLIO OPTIMIZATION MODEL BASED ON DUAL EXPECTED UTILITY</b> <i>Yuelin Gao</i>	793
144-07009	<b>OPTIMIZATION OF INTELLIGENT ISOLATION STRUCTURE UNDER THE ACTION OF COUPLING EARTHQUAKE</b> <i>Yannian Zhang</i>	799
145-07010	<b>FUZZY C-MEANS CLUSTER SEGMENTATION ALGORITHM BASED ON</b>	811

	<b>HYBRIDIZED PARTICLE SWARM OPTIMIZATION</b>	
	<i>Li Yan-ling</i>	
146-07012	<b>THREE PARTICLE SWARM ALGORITHMS TO IMPROVE COVERAGE OF CAMERA NETWORKS WITH MOBILE NODES</b>	<b>816</b>
	<i>Yichun Xu</i>	
147-07013	<b>SCALABLE COLLUSION SECURE FINGERPRINTING FOR MULTIMEDIA</b>	<b>821</b>
	<i>Jingshen Zhang</i>	
148-07016	<b>USING GENETIC ALGORITHM TO FIND NEAR COLLISIONS FOR THE COMPRESS FUNCTION OF HAMSII-256</b>	<b>826</b>
	<i>Li Yun-qiang</i>	
149-07017	<b>UNWEIGHTED MULTIPLE GROUP METHOD WITH ARITHMETIC MEAN</b>	<b>830</b>
	<i>Li Yujian</i>	
150-07018	<b>INFORMATION FUSION OF CROSSING NETWORK COMMUNITIES BASED ON ANALYZING INTERESTS</b>	<b>835</b>
	<i>Fan SU</i>	
151-07019	<b>A IMPROVED EVALUATION METHOD FOR INTERACTIVE GENETIC ALGORITHMS AND ITS APPLICATION IN PRODUCT DESIGN</b>	<b>840</b>
	<i>Sun Yan</i>	
152-07020	<b>THE OPTIMIZATION OF PARALLEL SMITH-WATERMAN SEQUENCE ALIGNMENT USING ON-CHIP MEMORY OF GPGPU</b>	<b>844</b>
	<i>Qian Zhang</i>	
	<b>Volume-2</b>	
153-07021	<b>AN ANIMAL DISEASE DIAGNOSIS SYSTEM BASED ON THE ARCHITECTURE OF BINARY-INFERENCE-CORE</b>	<b>851</b>
	<i>Wenxue Tan</i>	
154-07024	<b>APPLICATION OF PARTICLE SWARM OPTIMIZATION IN FLOOD OPTIMAL CONTROL OF RESERVOIR GROUP</b>	<b>856</b>
	<i>Wang Jian-qun</i>	
155-07027	<b>A NEW ANALYSIS METHOD OF CROP CULTIVARS REGIONAL TEST</b>	<b>860</b>
	<i>Guo Ruilin</i>	
156-07028	<b>A METHODOLOGY FOR TEST SUIT REDUCTION IN USER-SESSION-BASED TESTING</b>	<b>864</b>
	<i>Ying Huang</i>	
157-07029	<b>A NOVEL SEGMENTATION ALGORITHM FOR COMPLEX 3D MESH MODEL IN COMPUTER VISION</b>	<b>869</b>
	<i>Z.X. Zhang</i>	
158-07030	<b>MODELING OF MILL LOAD FOR WET BALL MILL VIA GA AND SVM BASED ON SPECTRAL FEATURE</b>	<b>874</b>

	<i>Lijie Zhao</i>		
159-07031	<b>SEMANTIC INCLINATION MINING BASED ON DEPENDENCY GRAMMAR FOR CHINESE BLOG</b>	<b>880</b>	
	<i>Hui Yang</i>		
160-07033	<b>A WAVELET IMAGE CODER AND HARDWARE</b>	<b>885</b>	
	<i>Wenju Gao</i>		
161-07034	<b>APPLICATION OF CELLULAR AUTOMATA TO SIMULATE THE PENETRATION PROCESSES OF SULFATE ION IN CONCRETE</b>	<b>889</b>	
	<i>Jian Cao</i>		
162-07036	<b>AN IMPROVED ALGORITHM OF MINING STRONG JUMPING EMERGING PATTERNS BASED ON SORTED SJEP-TREE</b>	<b>894</b>	
	<i>Xiangtao Chen</i>		
163-07037	<b>A NEW OLFACTORY RECEPTOR MODEL BASED ON CHAOS</b>	<b>899</b>	
	<i>Xing Wang</i>		
164-07045	<b>A FRAMEWORK FOR HIGH DIMENSIONAL DATA REDUCTION IN THE MICROARRAY DOMAIN</b>	<b>903</b>	
	<i>Ali Anaissi</i>		
165-07050	<b>FAULT DIAGNOSIS OF TE PROCESS BASED ON ENSEMBLE IMPROVED BINARY-TREE SVM</b>	<b>908</b>	
	<i>Anna Wang</i>		
166-07054	<b>DISCOVERING SUB-GOALS FROM LAYERED STATE SPACE</b>	<b>913</b>	
	<i>Zhao Jin</i>		
167-07059	<b>SEMANTIC-DRIVEN MODEL OF DYNAMIC LOGISTICS SERVICES COMPOSITION AND OPTIMIZATION BASED ON QOS</b>	<b>918</b>	
	<i>Xiaoyan Wang</i>		
168-07063	<b>EFFICIENT LINK SCHEDULING FOR TDMA BASED WMN USING MULTI-OBJECTIVE GENETIC ALGORITHM</b>	<b>923</b>	
	<i>Chen Jian</i>		
169-07064	<b>AN EFFECTIVE MODIFIED PARTICLE SWARM OPTIMIZATION ALGORITHM FOR PROCESS PLANNING</b>	<b>928</b>	
	<i>Xinyu LI</i>		
170-07066	<b>IOVRPSTW AND ITS IMPROVED GENETIC ALGORITHM</b>	<b>933</b>	
	<i>Duan Fenghua</i>		
171-07067	<b>A FINITE TERMINATION MEHROTRA-TYPE PREDICTOR-CORRECTOR ALGORITHM FOR SEMIDEFINITE OPTIMIZATION</b>	<b>937</b>	
	<i>Mingwang Zhang</i>		
172-07070	<b>ENERGY ENTROPY MULTIPATH ROUTING OPTIMIZATION ALGORITHM IN MANET BASED ON GA</b>	<b>943</b>	

	<i>Baolin Sun</i>	
173-07072	<b>A NEGOTIATION INTERACTION MODEL BETWEEN SERVICE AGENTS</b> <i>Wei Juanli</i>	<b>948</b>
174-07073	<b>DISCUSSION ON THE OPTIMAL ALLOCATE MODEL ABOUT THE SICKBEDS OF OPHTHALMOLOGY BASED ON MULTI-OBJECTIVE OPTIMIZATION METHOD</b> <i>QingSong Jiang</i>	<b>953</b>
175-07074	<b>A NOVEL APPROACH FOR DETECTING FORGED IMAGE</b> <i>Zhen Zhang</i>	<b>958</b>
176-07075	<b>A NOVEL MODEL FOR SPLICING DETECTION</b> <i>Zhen Zhang</i>	<b>962</b>
177-07076	<b>DIRECTION FINDING OF SIGNAL SUBSPACE FITTING BASED ON CULTURAL BEE COLONY ALGORITHM</b> <i>Hongyuan Gao</i>	<b>966</b>
178-07077	<b>FAST AND EFFICIENT MINING FOR FREQUENT PATTERNS ON BIOLOGICAL SEQUENCE</b> <i>Liu Wei</i>	<b>971</b>
179-07078	<b>QUANTWIZ: A SCALABLE PARALLEL SOFTWARE PACKAGE FOR LABEL-FREE PROTEIN QUANTIFICATION</b> <i>Jing Wang</i>	<b>976</b>
180-07079	<b>TIME SLICING AND ARBITRARY HORIZON EXTRACTION ALGORITHM AND IMPLEMENTATION OF 3D SEG Y SEISMIC DATA VOLUME</b> <i>Tuyou Peng</i>	<b>981</b>
181-07080	<b>OPTIMIZATION OF COLOR REPRODUCTION BASED ON CHROMATIC PROPERTIES OF MULTIPLE REAL OBSERVERS</b> <i>Li Liu</i>	<b>985</b>
182-07083	<b>THE STUDY OF DATA ANALYSIS METHODS BASED ON FMRI BRAIN-COMPUTER INTERFACE</b> <i>Haifang Li</i>	<b>989</b>
183-07084	<b>A NEW OPTIMIZATION METHOD, THE ALGORITHM OF CHANGES, FOR BIN PACKING PROBLEM</b> <i>Sik-Chung Tam</i>	<b>994</b>
184-07086	<b>ENHANCED SEMI-SUPERVISED LOCAL FISHER DISCRIMINANT ANALYSIS FOR GENE EXPRESSION DATA CLASSIFICATION</b> <i>Hong Huang</i>	<b>1000</b>
185-07088	<b>PORTING MOLECULAR DYNAMICS SIMULATION TO HETEROGENEOUS MULTI-CORE ARCHITECTURE</b> <i>Guofu Feng</i>	<b>1005</b>

186-07090	<b>COGNITIVE APPROACH TO BIO-INSPIRED MEDICAL IMAGE UNDERSTANDING</b> <i>Lidia Ogiela</i>	1010
187-07091	<b>GENERALIZED SYNCHRONIZATION BETWEEN DIFFERENT FRACTIONAL-ORDER CHAOTIC SYSTEMS BASED ON NONLINEAR FEEDBACK</b> <i>LILIAN HUANG</i>	1014
188-07092	<b>DEFINITION AND ANALYSIS OF SNP-FREE REGIONS OF CURRENT GENOME WIDE ASSOCIATION STUDY DATABASES</b> <i>Rong Qiu</i>	1018
189-07098	<b>SPECTRAL REPRESENTATION OF DNA SEQUENCES AND ITS APPLICATION</b> <i>Zhujin Zhang</i>	1023
190-07099	<b>AN IMPROVED CHAOS OPTIMIZATION ALGORITHM BASED ON GROUP SEARCHING</b> <i>Dongju Jiang</i>	1028
191-07100	<b>LUNG NODULE CLASSIFICATION COMBINING RULE-BASED AND SVM</b> <i>Zhang Jing</i>	1033
192-07101	<b>ROBUST CONTROLLER DESIGN FOR ACTIVE QUEUE MANAGEMENT SYSTEM</b> <i>Bo Meng</i>	1037
193-07102	<b>THE RESEARCH OF FAST RECOVERY SPATIAL INFORMATION NETWORK</b> <i>Li Rui-xin</i>	1041
194-07103	<b>NON-FRAGILE <math>H_{\infty}</math> CONTROL FOR A CLASS OF NONLINEAR SAMPLED-DATA SYSTEM</b> <i>Shi-gang Wang</i>	1044
195-07106	<b>A BI-OBJECTIVE CASE OF NO-WAIT FLOWSHOPS-MODELING AND SOLUTION METHOD</b> <i>M. Jenabi</i>	1048
196-07108	<b>REASONING AND REALIZATION BASED ON ONTOLOGY MODEL AND JENA</b> <i>Zhang Wei</i>	1057
197-07109	<b>TWO-PHASE BIOMEDICAL NAMED ENTITY RECOGNITION BASED ON SEMI-CRFS</b> <i>Li Yang</i>	1061
198-07110	<b>A STABILITY ANALYSIS OF A QUADRATIC FUNCTION CHEMOSTAT MODEL WITH TIME DELAY</b> <i>Wei Daijun</i>	1066



199-07111	<b>A MOBILITY MODEL BASED ON TRAFFIC FLOW THEORY FOR VEHICULAR DELAY TOLERANT NETWORK</b> <i>Yang Wei-dong</i>	1071
200-07112	<b>A NEW MODELING METHOD BASED ON BAGGING ELM FOR DAY-AHEAD ELECTRICITY PRICE PREDICTION</b> <i>Huixin Tian</i>	1076
201-07116	<b>CONSTRUCTING AND ANALYZING FOLKSONOMY IN ONLINE SOCIAL BOOKMARKING</b> <i>Zhongming Han</i>	1080
202-07117	<b>A HEURISTIC FOR TASK SCHEDULING BASED ON HASSE DIAGRAM</b> <i>Qiushi Liang</i>	1085
203-07118	<b>A NOVEL ANT ALGORITHM FOR PERMUTATION FLOW SHOP PROBLEM</b> <i>Wenjin Yang</i>	1093
204-07121	<b>A MODIFIED PARTICLE SWARM OPTIMIZATION ALGORITHM FOR RELIABILITY PROBLEMS</b> <i>Dexuan Zou</i>	1098
205-07122	<b>CVT FAULT DIAGNOSIS BASED ON IMMUNE PRINCIPLE AND OIL SPECTRUM ANALYSIS</b> <i>Shuai Gao</i>	1106
206-07123	<b>NONLINEAR PSO—CONVERGENCE ANALYSIS AND PARAMETER ADJUSTMENT SCHEMES</b> <i>Xuexue Zhao</i>	1111
207-07124	<b>ROCK BURST FORECASTING IN DEEP MINE BASED ON NEW BIONICS CLUSTERING ALGORITHM</b> <i>Wei Gao</i>	1116
208-07125	<b>DESIGN OF ONLINE MONITORING UNIT OF CAPACITIVE EQUIPMENT BASED ON DSP</b> <i>Zhengwu Dai</i>	1121
209-07127	<b>DISASSEMBLY SEQUENCE PLANNING BASED ON ANT COLONY OPTIMIZATION ALGORITHM</b> <i>Xuejun Fang</i>	1125
210-07130	<b>RESEARCH ON THE COMPOUND OPERATION OPTIMIZATION PROBLEM OF AS/RS</b> <i>Yangbo Huang</i>	1130
211-07131	<b>NON-COOPERATIVE SPECTRUM ALLOCATION BASED ON GAME THEORY IN COGNITIVE RADIO NETWORKS</b> <i>Yi-Bing Li</i>	1134
212-07134	<b>BCP-MG: A WEB SERVER FOR PREDICTING BACTERIAL</b>	1138

**COMMUNITY OF METAGENOME***Deguo Xia*

213-07135	<b>SIMILARITY ANALYSIS OF DNA SEQUENCES BASED ON A COMPACT REPRESENTATION</b>	<b>1143</b>
	<i>Zhujin Zhang</i>	
214-07136	<b>CLASSIFICATION OF SCHIZOPHRENIA'S EEG BASED ON HIGH ORDER PATTERN DISCOVERY</b>	<b>1147</b>
	<i>Zhang Sheng</i>	
215-07137	<b>IDENTIFICATION OF DNA MOTIFS USING TWO DIFFERENT MODELS</b>	<b>1150</b>
	<i>Caisheng He</i>	
216-07138	<b>METAGEGMRC: A WEB SERVER FOR GENOME-SCALE METABOLIC RECONSTRUCTION AND COMPARISON OF METAGENOMES</b>	<b>1155</b>
	<i>Zhiqiang Liu</i>	
217-07140	<b>CO-EXPRESSION AND EVOLUTIONARY CONSTRAINT ON PROTEIN COMPLEXES</b>	<b>1159</b>
	<i>Kaifang Pang</i>	
218-07141	<b>STUDY ON INTERACTION BETWEEN AMPICILLIN ANTIBODY AND DETECTION INTERFERING PROTEINS BY COMPUTER AIDED PROTEIN-PROTEIN DOCKING FOR BIOSENSOR INTERESTING</b>	<b>1164</b>
	<i>Minghua Wang</i>	
219-07142	<b>TOPOLOGY INTELLIGENCE COMPUTATION OF 3D SEEPAGE OF LANDSLIDE IN THE THREE GORGES RESERVOIR AREA</b>	<b>1170</b>
	<i>Kun Song</i>	
220-07145	<b>A NOVEL VOICE ACTIVITY DETECTION METHOD USING ENERGY STATISTICAL COMPLEXITY</b>	<b>1175</b>
	<i>Huan Zhao</i>	
221-07146	<b>REDEPLOYMENT OF CLUSTER HEADS IN WIRELESS SENSOR NETWORKS WITH GENETIC ALGORITHM</b>	<b>1180</b>
	<i>Ali Ghaffari</i>	
222-07147	<b>A PROGRAMMABLE BIOMOLECULAR COMPUTING DEVICES WITH RNAI</b>	<b>1185</b>
	<i>Xiangrong Liu</i>	
223-07148	<b>SOLVING HOT ROLLING SCHEDULING PROBLEM BY A NEW POPULATION-BASED EXTREMAL OPTIMIZATION ALGORITHM</b>	<b>1189</b>
	<i>Sun kai</i>	
224-07149	<b>A NEURAL NETWORK ADAPTIVE CONTROL AND ITS APPLICATION</b>	<b>1194</b>
	<i>Gang Liu</i>	
225-07151	<b>QUADRATURE KALMAN FILTER WITH EQUALITY CONSTRAINTS</b>	<b>1197</b>
	<i>Jinguang Chen</i>	

226-07154	<b>THE CHARACTERISTICS OF INDUCED FORCE FOR AN IN-LINE VIBRATING CYLINDER IN A CROSS FLOW</b> <i>Yong Xia</i>	1202
227-07155	<b>DUPLICATE REMOVAL ALGORITHMS OF INDEL GAP IN PROTEIN SEQUENCE ALIGNMENT</b> <i>Shijun Liu</i>	1208
228-07156	<b>A HIERARCHICAL CLUSTERING BASED GLOBAL OUTLIER DETECTION METHOD</b> <i>Bin-mei LIANG</i>	1213
229-07157	<b>PLANT ROOT IMAGE PROCESSING AND ANALYSIS BASED ON 2D SCANNER</b> <i>Yugan Chen</i>	1216
230-07160	<b>A METRIC ALGORITHM BASED ON THREE ELEMENTS OF TEXTURE VISUAL FEATURE</b> <i>Zhao Haiying</i>	1221
231-07161	<b>STUDY ON LOSSLESS DATA COMPRESSION BASED ON EMBEDDED SYSTEM</b> <i>Zhiyong Zhang</i>	1225
232-07162	<b>CONTINUOUS QUANTUM PARTICLE SWARM OPTIMIZATION AND ITS APPLICATION TO OPTIMIZATION CALCULATION AND ANALYSIS OF ENERGY-SAVING MOTOR USED IN BEAM PUMPING UNIT</b> <i>Qiaoyu Yin</i>	1231
233-07163	<b>MATHEMATICAL MODELING BASED ON LAMIVUDINE SWITCHING TO ADEFOVIR DIPIVOXIL AND TO ENTECAVIR ANTI-HEPATITIS B INFECTION TREATMENT</b> <i>Zhou Li</i>	1236
234-07165	<b>APPLICATION OF TOEPLITZ MATRIX IN IMAGE RESTORATION</b> <i>YU Hua</i>	1240
235-07166	<b>DEVELOPMENT OF 3D LANDSLIDE DYNAMIC MODELING BASED ON DSAF INTEGRATION SYSTEM</b> <i>Jiangtao Cheng</i>	1245
236-07171	<b>RESEARCH ON ANNEALING GENETIC HYBRID OPTIMIZATION OF TEST EXCITATION IN NONLINEAR ANALOG CIRCUIT</b> <i>LIN Hai-jun</i>	1251
237-07173	<b>ANALYSIS OF PROTEIN SEQUENCE SIMILARITY</b> <i>Yusen Zhang</i>	1255
238-07174	<b>TWO FEATURE SELECTIONS FOR ANALYSIS OF MICROARRAY DATA</b> <i>Yusen Zhang</i>	1259
239-07176	<b>AN IMPROVED RECURRENT NEURAL NETWORK AND ITS</b>	1263

**APPLICATION IN NONLINEAR CONTROL**

*Chen Qili*

240-07177	<b>A MERGING AND SPLITTING ALGORITHM BASED ON MUTUAL INFORMATION FOR DESIGN NEURAL NETWORKS</b>	<b>1268</b>
	<i>Zhaozhao Zhang</i>	
241-07178	<b>ANN BASED THREE-VALUE LOGIC SVPWM CONTROL IN CSR</b>	<b>1273</b>
	<i>Jinbang Xu</i>	
242-07179	<b>A REAL CODED HYBRID EVOLUTIONARY STRATEGY FOR PROTEIN FOLDING WITH LATTICE MODEL</b>	<b>1278</b>
	<i>Jinshuo Liu</i>	
243-07180	<b>PREDICTION OF CHAOTIC TIME SERIES OF NEURAL NETWORK AND AN IMPROVED ALGORITHM</b>	<b>1282</b>
	<i>Yin Xin</i>	
244-07181	<b>APPROXIMATION FOR PREEMPTIVE SCHEDULING STOCHASTIC JOBS ON IDENTICAL PARALLEL MACHINES</b>	<b>1287</b>
	<i>Xiaoyong Tang</i>	
245-07182	<b>A HYBRID IMMUNE PSO FOR CONSTRAINED OPTIMIZATION PROBLEMS</b>	<b>1291</b>
	<i>Aijia Ouyang</i>	
246-06	<b>IMPLEMENTATION OF TILE SEQUENCING FOR DNA LOGICAL COMPUTATION TOWARD NEXT-GENERATION INFORMATION SECURITY</b>	<b>1296</b>
	<i>Miki Hirabayashi, Hiroaki Kojima, Kazuhiro Oiwa</i>	
247-10	<b>CONTEXTUAL-INSERTION TO SOLVE #P VERSION OF THE SQUARE-TILING PROBLEM</b>	<b>1308</b>
	<i>Rani Siromoney</i>	
248-11	<b>QUANTITATIVE MODELING AND SIMULATION OF ANTERIOR CHAMBER IN OCT IMAGES</b>	<b>1314</b>
	<i>Le Su</i>	
249-13	<b>SOME ANALYSIS ON CERTAIN TYPES OF SPLICING SYSTEMS</b>	<b>1319</b>
	<i>Fong Wan Heng</i>	
250-14	<b>WATSON-CRICK ONLINE TESSELLATION AUTOMATON AND TIMED WATSON-CRICK <math>\Omega</math>-AUTOMATON</b>	<b>1322</b>
	<i>Mary Jemima Samuel</i>	
251-15	<b>ENZYMATIC NUMERICAL P SYSTEMS - A NEW CLASS OF MEMBRANE COMPUTING SYSTEMS</b>	<b>1331</b>
	<i>Ana Pavel</i>	
252-16	<b>IMPLEMENTATION OF A REAL TIME DECODER FOR REAL NEUROPROSTHETIC APPLICATIONS</b>	<b>1337</b>

*Jonathan Becedas,Rodrigo Quian Quiroga*

253-17	<b>COLLABORATIVE PROJECTION PURSUIT FOR FACE RECOGNITION</b> <i>Eduardo Rodriguez</i>	1346
254-18	<b>INSTANCE SERIATION FOR PROTOTYPE ABSTRACTION</b> <i>Konstantinos Nikolaidis</i>	1351
255-19	<b>MODULATION OF NEURONAL ACTIVITY WITH EXTREMELY LOW-FREQUENCY MAGNETIC FIELDS:INSIGHTS FROM BIOPHYSICAL MODELING</b> <i>Julien Modolo</i>	1356
256-21	<b>MATHEMATICAL MODELING OF A COMPLEX SYSTEM IN HEMODYNAMICS</b> <i>D. S. Sankar</i>	1365
257-22	<b>SEGMENTATION AND REVERSIBLE WATERMARKING OF PERIPHERAL BLOOD SMEAR IMAGES</b> <i>Feminna Sheeba</i>	1373
258-23	<b>A BIO-INSPIRED SOFTWARE FOR SEGMENTING DIGITAL IMAGES</b> <i>Daniel D´iaz-Pernil</i>	1377
259-24	<b>COLUMN AND ROW CATENATION PETRI NET SYSTEM</b> <i>D. Lalitha</i>	1382
260-25	<b>COOPERATIVE COEVOLUTIONARY GENETIC ALGORITHMS TO FIND OPTIMAL ELIMINATION ORDERINGS FOR BAYESIAN NETWORKS</b> <i>Xuchu Dong</i>	1388
261-26	<b>PARTICLE SWARM OPTIMIZATION FOR ECONOMIC DISPATCH PROBLEMS WITH VALVE-POINT EFFECTS</b> <i>Kusum Deep</i>	1395
262-27	<b>AUTOMATIC SYSTEM RECOGNITION OF LEBANESE LICENSE PLATES</b> <i>Al Hussain AKOUM</i>	1399
263-28	<b>THE MATHEMATICAL THEORY OF INTEGRATIVE PHYSIOLOGY: APPLICATION TO HIPPOCAMPUS FOR DRUG DISCOVERY</b> <i>Omar Bennani</i>	1406
264-29	<b>GENETIC ALGORITHMS AND THE ART OF ZEN</b> <i>Jack Coldridge,Martyn Amos</i>	1417
265-30	<b>HN ARRAY SPLICING SYSTEM</b> <i>P. Helen Chandra</i>	1424
266-31	<b>TWO LOCAL SEARCH STRATEGIES FOR DIFFERENTIAL EVOLUTION</b> <i>Musrrat Ali and Millie Pant</i>	1429
267-33	<b>DISULFIDE BONDING STATE PREDICTION WITH SVM BASED ON</b>	1436

**PROTEIN TYPES\****Chih-Ying Lin*

268-35	<b>FEEDBACK CONTROL OF CHEMOTHERAPY DRUG SCHEDULING FOR PHASE SPECIFIC CANCER TREATMENT</b>	1443
	<i>S Algoul, M S Alam, M A Hossain</i>	
269-37	<b>MODIFIED PARALLEL PARTICLE SWARM OPTIMIZATION FOR GLOBAL OPTIMIZATION USING MESSAGE PASSING INTERFACE</b>	1451
	<i>Kusum Deep, Sunita Sharma</i>	
270-38	<b>PALINDROMIC COMPLETION OF A WORD</b>	1459
	<i>Kalpana Mahalingam</i>	
271-39	<b>PETRI NET MODELS AND NON LINEAR GENETIC DISEASES</b>	1466
	<i>P. Persis Glory</i>	
272-40	<b>HUMORAL-MEDIATED CLUSTERING</b>	1471
	<i>Waseem Ahmad</i>	
273-41	<b>P SYSTEMS WITH SHUFFLE OPERATION</b>	1482
	<i>Yunyun Niu</i>	
274-42	<b>CHARACTERIZING INFORMATION TRANSMISSION IN CEREBELLAR GRANULE NEURON</b>	1487
	<i>Nimshitha Abdulmanaph</i>	
275-43	<b>MODELING CEREBELLAR GRANULAR LAYER EXCITABILITY AND COMBINATORIAL COMPUTATION WITH SPIKES</b>	1495
	<i>Chaitanya Medini</i>	
276-44	<b>RECONSTRUCTING EXTRACELLULAR LOCAL FIELD POTENTIAL IN CEREBELLAR GRANULAR LAYER NETWORKS</b>	1504
	<i>Harilal Parasuraman</i>	
277-45	<b>AN EFFICIENT PIXEL VALUE BASED MAPPING SCHEME TO DELINEATE PECTORAL MUSCLE FROM MAMMOGRAMS</b>	1510
	<i>N. Saltanat</i>	
278-47	<b>AUTOMATIC FISH SPECIES CLASSIFICATION BASED ON ROBUST FEATURE EXTRACTION TECHNIQUES AND ARTIFICIAL IMMUNE SYSTEMS</b>	1518
	<i>Marco T. A. Rodrigues</i>	
279-49	<b>ACCELERATING THE SHUFFLED FROG LEAPING ALGORITHM BY PARALLEL IMPLEMENTATIONS IN FPGAS</b>	1526
	<i>Daniel M. Muñoz, Carlos H. Llanos</i>	
280-50	<b>PARALLEL SPLICING ON ISO-ARRAYS</b>	1535
	<i>V. Masilamani</i>	
281-51	<b>TRAJECTORY ARRAY P SYSTEM</b>	1543
	<i>A.S.Prasanna Venkatesan</i>	

282-53	<b>NEURAL NETWORK SYSTEM FOR INVERSE KINEMATICS PROBLEM IN 3 DOF ROBOTICS</b> <i>Bassam Daya</i>	1550
283-54	<b>PARALLEL DOUBLE SPLICING ON IMAGES</b> <i>V. Masilamani</i>	1558
284-55	<b>A VARIANT OF TILE PASTING P SYSTEM FOR TILING PATTERNS</b> <i>S. Jebasingh</i>	1568
285-56	<b>PARSING FOR LANGUAGES OF STRING TOKEN PETRI NETS</b> <i>D.K. Shirley Gloria</i>	1577
286-57	<b>A VERY HIGH ACCURACY HANDWRITTEN CHARACTER RECOGNITION SYSTEM FOR FARSI/ARABIC DIGITS USING CONVOLUTIONAL NEURAL NETWORKS</b> <i>Sajjad S. Ahranjany, Farbod Razzazi</i>	1585
287-59	<b>MODELING NEURONAL ENSEMBLE FIRING ACTIVITY THROUGH INTERMITTENT CHAOS</b> <i>Riccardo Storchi</i>	1593
288-60	<b>STATELESS MULTICOUNTER <math>5' \rightarrow 3'</math> WATSON-CRICKAUTOMATA</b> <i>Omer Egecio glu</i>	1599
289-62	<b>IDENTIFICATION SYSTEM OF THE TYPE OF VEHICLE</b> <i>Bassam DAYA</i>	1607
290-64	<b>SYNTHESIS OF FREQUENCY GENERATOR VIA SPIKING NEURONS NETWORK: A GENETIC ALGORITHM APPROACH</b> <i>Gabriela E. Soares</i>	1613
291-65	<b>SIMULATING TRITROPHIC INTERACTIONS BY MEANS OF P SYSTEMS</b> <i>M. Angels Colomer</i>	1621
292-66	<b>PERFORMANCE, ACCURACY, POWER CONSUMPTION AND RESOURCE UTILIZATION ANALYSIS FOR HARDWARE / SOFTWARE REALIZED ARTIFICIAL NEURAL NETWORKS</b> <i>André L.S. Braga, Carlos H. Llanos</i>	1629
293-67	<b>COMPARISON BETWEEN TWO FPGA IMPLEMENTATIONS OF THE PARTICLE SWARM OPTIMIZATION ALGORITHM FOR HIGH-PERFORMANCE EMBEDDED APPLICATIONS</b> <i>Daniel M. Muñoz, Carlos H. Llanos</i>	1637
294-68	<b>PARALLEL NUMERICAL P SYSTEMS USING A MIMD BASED ARCHITECTURE</b> <i>David Reid</i>	1646
295-69	<b>CHAOTIC PARTICLE SWARM OPTIMIZATION ALGORITHM FOR SUPPORT VECTOR MACHINE</b>	1654

*Shuzhou Wang*

296-70      **SOFT ADAPTIVE PARTICLE SWARM ALGORITHM FOR LARGE SCALE OPTIMIZATION**      1658

*Yamina Mohamed Ben Ali*

297-71      **TOWARDS OPTIMAL IMPLEMENTATION OF A CLASS OF QUADRATURE MIRROR FILTER USING GENETIC ALGORITHMS**      1663

*Gurvinder S. Baicher*

298-72      **ON THE USE OF INNATE AND ADAPTIVE PARTS OF ARTIFICIAL IMMUNE SYSTEMS FOR ONLINE FRAUD DETECTION**      1669

*R. Huang*

299-75      **A DOMAIN KNOWLEDGE BASED APPROACH FOR MEDICAL IMAGE RETRIEVAL**      1677

*Haiwei Pan*

300-77      **INTRA- AND INTER-CONNECTIVITY INFLUENCES ON EVENT RELATED CHANGES IN THALAMOCORTICAL ALPHA RHYTHMS**      1685

*Basabdatta Sen Bhattacharya*

301-79      **COLLECTIVE INTELLIGENCE ON DYNAMIC MANUFACTURING SCHEDULING OPTIMIZATION**      1693

*Ana Madureira*

**'CWJ QT'RF GZ**