# Table of Contents

## Preface

### Conference Organization

### The Steering Committee of IEEE ICCI Series

### Table of Contents

## Keynotes

**Cognitive Memory and its Applications**

*Prof. Bernard Widrow*

**A Granular Computing and Human-Centricity in Computational Intelligence**

*Prof. Witold Pedrycz*

**Computer Vision vs. Human Vision**

*Prof. Bo Zhang*

**Cognitive Computing and World Wide Wisdom (WWW+)**

*Prof. Yingxu Wang*

**Towards Cognitive Analysis of DNA**

*Prof. Witold Kimner*

## Plenary Panels

**Perspectives on Cognitive Computing and Applications: Summary of Plenary Panel I of IEEE ICCI’10**

*Yingxu Wang, Witold Pedrycz, George Baciu, Ping Chen, Hugo de Garis, Zhongshi Shi, Guoyin Wang, Patrick Wang, and Yiyu Yao*

**Perspectives on Cognitive Informatics and Its Future Development: Summary of Plenary Panel II of IEEE ICCI’10**

*Yingxu Wang, Bernard Widrow, Bo Zhang, Witold Kinsner, Kenji Sugawara, Fuchun Sun, Thomas Weise, Yixin Zhong, and Du Zhang*

## Session A1 Cognitive Informatics

**A Study of Particle Swarm Optimization for Cognitive Machines**

*Dario Schor and Witold Kinsner*

**Cognitive Models of Causal Inferences using Causation Networks**

*Yingxu Wang*

**Object/Gesture Recognition Software in the “China Brain Project”**

*Hugo de Garis, Chen Xiaoxi, Yang Ye, Chen Shuo, Ben Goertzel, and Lian Ruiting*

**A Novel Emotion Recognition Approach Based on Ensemble Learning and Rough Set Theory**

*Yang Yang, Guoyin Wang, Zhiyu Zhang, and Kan Tian*

**Prion Protein and Human Cognition**

*Wenguan Zou and Jue Yuan*

**The Effect of Cognitive Load on Interaction Pattern of Emotion and Working Memory: An ERP Study**

*Xuebing Li, Zhengzheng Ouyang, and Yue-jia Luo*

## Session B1 Cognitive Informatics Applications I

**Semantic Analysis of Free Text and its Application on Automatically Assigning ICD-9-CM Codes to Patient Records**

*68*
Ping Chen, Araly Barrera, and Chris Rhode

Cognitive-Driven Requirements Prioritization: A Case Study
Nadina M. Carod and Alejandra Cechich

Attitude Synchronization of Spacecraft Formation using Neural Network
Haibo Min, Fuchun Sun, Shicheng Wang, Jinsheng Zhang, and Zhijie Gao

Flight Behavior Recognizing in Terminal Area Based on Support Vector Machine
Laihong Hu, Fuchun Sun, Huaping Liu, and Hualong Xu

From Consumer Perception Characterization to Human Centered Industrial Product Design
Xianyi Zeng and Ludovic Koehl

Stability and Maximum Throughput Analysis of Cognitive MIMO Radio
Mingming Li, Dongxu Wang, Chong Li, Jiaru Lin, and Zhigiang He

Session C1 Computational Intelligence and Applications

Web Service Recommendation Based on QoS Prediction Method
Jike Ge, Zuqin Chen, Jun Peng, Taifu Li, and Long Zhang

A Fuzzy Method Designed to Improve Riding Comfort and Handling Safety of Engineering Vehicle
Jianmin Sun and Alha Zhu

Control of Hénon Chaotic Systems by Chaotic Particle Swarm Optimization
Xingli Huang, Peifa Jia, Bo Liu, and Ling Wang

Distributed Intelligent Fault Diagnosis System based on System Fusion
Wei Liu, Taifu Li, Xiaqian Hu, and Xiaorong He

Image Dimensionality Reduction based on the HSV Feature
Liang Lie, Xue Wang, Bo Yang, and Jun Peng

Application of Statistical Learning Theory to Predict Corrosion Rate of Injecting Water Pipeline
Zhen Huang, Hong Liu, Mufiao Fan, and Chunbi Xu

Session A2 Cognitive Informatics Applications II

Extending a Multilingual Chat Application: Towards Collaborative Language Resource Building
Mitsunori Nakatsuka, Shotaro Yasunaga, and Kazuhiro Kuwabara

A Mismatch PCR-RFLP Primer Design for SNP Genotyping using Genetic Algorithm
Cheng-Hong Yang, Yu-Hwei Cheng, Li-Yeh Chuang, and Hsueh-Wei Chang

Study on Panoramic Virtual Reality System Based on WebGIS
Su Wang, Junping Du, and Tian Gao

Enhance Information Acquired Efficiency for Wireless Sensors Networks via Multi-bit Decision Fusion
Wen-Tsai Sung, Yao-Chi Hsu, and Kuan-Yu Chen
Session C2 Swarm Intelligence
Improving MAX-MIN Ant System Performance with the Aid of ART2-Based Twin Removal Method
Mahsa Imam, Esmat Pakizeh, Mir M. Pedram, and Hamid R. Arabnia

Using Stochastic Dynamic Step Length Particle Swarm Optimization to Direct Orbits of Chaotic Systems
Xingjuan Cai and Zhihua Cui

Using Social Cognitive Optimization Algorithm to Solve Nonlinear Equations
Zhihua Cui and Xingjuan Cai

Structural Optimization of Lennard-Jones Clusters by Hybrid Social Cognition Optimization Algorithm
Yongjing Chen, Zhihua Cui, and Jianchao Zeng

Session A3 Computational Intelligence Systems
SISCHMAX: Discovering Common Contour Patterns
Xiaobing Liu and Bo Zhang

A Handwriting Textline Extraction Approach Based On Connected Domain
Wei Gao, Fuchun Sun, and Zhonghang Yin

General Image Classification based on Sparse Representation
Yuanxuan Zuo and Bo Zhang

Quotient Space-based Boundary Condition for Particle Swarm Optimization Algorithm
Yuhong Chi, Fuchun Sun, Langfan Jiang, Chunyang Yu, and Chunli Chen

A Cognitive Crawler using Structure Pattern for Incremental Crawling and Content Extraction
Shijia Xi, Fuchun Sun, and Jianmin Wang

A Solution to Commutativity Problems Found in Iterated Belief Revision
Yan Ma and Robert E. Mercer

Session B3 Cognitive Computing
Discrete Dynamical Systems for Encoding Concurrent Computing Systems
Fernando L. Pelayo, Jose C. Valverde, Maria L., Pelayo, and Fernando Cuartero

A Mind Model for Brain-Like Computer
Zhongzhi Shi, Xuanfeng Wang, Zhiping Shi, Limin Chen, and Zhiuxiao Wang

A New Linguistic Approach to Sentiment Automatic Processing
Zied Kechaou, Mohamed Benammar, and Adel M. Alimi

Comparison of Stimulus Types in Visual P300 Speller of Brain-Computer Interfaces
Yang Liu, Zongtan Zhou, and Dewen Hu

Computers Do Better than Experts Matching Faces in a Large Population
Liu Ding, Chang Shu, Chi Fang, and Xiaoqing Ding

Design of an Intelligent Support Agent Model for People with a Cognitive Vulnerability
Azizi A. Aziz and Michel C.A. Klein

Session C3 Patterns and Knowledge Recognition
A Hybrid Textual Entailment System using Lexical and Syntactic Features
Partha Pakray, Alexander Gelbukh, and Sivaji Banerjee

Tourism Domain Ontology Construction for the Unstructured Text Documents-paper for Text Knowledge Acquisition, Representation and Reasoning
Suqin Tang and Zixing Cai

Using Space Syntax to Understand Knowledge Acquisition and Wayfinding in Indoor Environments
Rui Li and Alexander Klippel
Keyphrase Extraction based on Semantic Relatedness
Fei Xie, Xindong Wu, and Xuegang Hu
308

Fingerprint Enhancement Based on Non-separable Wavelet
Jiajia Lei, Hiyam Hatemy, Long Zhou, Xinge You, Patrick S.P.Wang, and Duanquan Xu
313

Main Retina Information Processing Pathways Modeling
Hui Wei, Xudong Guan, and Qingsong Zuo
318

Session A4 Knowledge Cognition and Learning
Harnessing Locality for Knowledge Inconsistency Management
Du Zhang
325

Development of a Knowledge-Based System for Monitoring and Diagnosis of the CO2 Capture Process
Qing Zhou, Christine Chan, and Paitoon Tontiwachwuthikul
333

Incremental Discovery of Probabilistic Rules from Clinical Databases based on Rough Set Theory
Shusaku Tsumoto
339

Hybrid Incremental Learning Algorithms for Bayesian Network Structures
Da Shi and Shaohua Tan
345

EEG Hidden Information Mining using Hierarchical Feature Extraction and Classification
Deng Wang, Duqian Miao, Chen Xie, and Hongyun Zhang
353

Machine Learning in Fuel Consumption Prediction of Aircraft
Guanzhong Li
358

Session B4 Image and Pattern Cognition
Structured Noise Analysis in Intrinsic Optical Imaging
Haibing Yin, Yadong Liu, Zongtian Zhou, Ming Li, Yucheng Wang, and Dewen Hu
364

Automated Classification of Magnetic Resonance Brain Images using Wavelet Genetic Algorithm and Support Vector Machine
Ahmed Kharrat, Karim Gasmi, and Mohamed B. Messaoud
369

Rapid and Automatic Atlas-based Approach of Alzheimer's Disease Assessment by Positron Emission Tomography Neuroimages
Guoyu Qian, Xuezhen Shen, Suhuai Luo, Jesse S. Jin, and Wieslaw L. Nowinski
375

Text Knowledge Representation Model based on Human Concept Learning
Xiangfeng Luo, Chuanliang Cai, and Qingliang Hu
383

A Visual Search System based on Multi-scale Population Cell Coding
Fang Pang, Jun Miao, Laiyun Qing, and Wen Gao
391

Hypoxia EEG Analysis Based on Phase Synchronization Theory
Na Wang, Rulong Wang, Shangwu Zhu, Yuanzhe Zheng, and Jin Zhang
397

Session C4 Intelligent Information Systems
A New Approach to the Study of Lightning-Strike Density Distributions
Aram Faghfouri, Witold Kinsmer, and David Swatek
401

Predicting RNA Secondary Structure with Tabu Search
Yongguo Liu, Jianrui Hao, and Jun Peng
409

Asymmetric Distributed Animation Rendering System Based on WAN
Yizhen Cao, Baofeng Lu, and Qi Wang
415

Human-Computer Interaction with Roles: A Cognitive Method for Interaction
Haibin Zhu, Min Hou, and Wenqian Shang
421
<table>
<thead>
<tr>
<th>Session A5 Cognitive Informatics Applications III</th>
<th>441</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Review on Ripple-Spreading Genetic Algorithms for Combinatorial Optimization Problems</td>
<td>441</td>
</tr>
<tr>
<td>Xiaobing Hu, Mark S. Leeson, Evor L. Hines, Ming Wang, and Ezequiel Di Paolo</td>
<td></td>
</tr>
<tr>
<td>Word Sense Distribution in a Web Corpus</td>
<td>449</td>
</tr>
<tr>
<td>Ping Chen, David Brown, Andrew Tran, Noble Ozoka, and Rafael Ortiz</td>
<td></td>
</tr>
<tr>
<td>Using Data Mining to Investigate Cognitive Processes by a Creativity Test– A Preliminary Study</td>
<td>454</td>
</tr>
<tr>
<td>Yu-Ling Lu, Yuan-Chang Wu, Wei-Ming Chen, Yu-Cheng Lien, and Chi-jui Lien</td>
<td></td>
</tr>
<tr>
<td>Locally Assembled Binary Feature with Feed-Forward Cascade for Pedestrian Detection in Intelligent Vehicles</td>
<td>458</td>
</tr>
<tr>
<td>Liping Yu, Feng Zhao, and Zhiyong An</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Session B5 Cognitive Informatics Applications IV</th>
<th>464</th>
</tr>
</thead>
<tbody>
<tr>
<td>In Search for Effective Granularity with DTRS</td>
<td>464</td>
</tr>
<tr>
<td>Bing Zhou and Yiyu Yao</td>
<td></td>
</tr>
<tr>
<td>Application of a Tool for Ontology Visualization</td>
<td>471</td>
</tr>
<tr>
<td>Simon Suigen Guo and Christine W Chan</td>
<td></td>
</tr>
<tr>
<td>A Semiautonomous Clustering Algorithm Based on Decision-theoretic Rough Set Theory</td>
<td>477</td>
</tr>
<tr>
<td>Hong Yu, Shuangshuang Chu, and Dachun Yang</td>
<td></td>
</tr>
<tr>
<td>Hierarchical Rough Decision Theoretic Framework for Text Classification</td>
<td>484</td>
</tr>
<tr>
<td>Wen Li, Duoqian Miao, Weili Wang, and Nan Zhang</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Session C5 Cognitive Communications</th>
<th>490</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personalized Search based on Learning User Click History</td>
<td>490</td>
</tr>
<tr>
<td>Che Qian Chen, Ke Quan Lin, He Shan Li, and Shou Bin Dong</td>
<td></td>
</tr>
<tr>
<td>Cognitive Garment Design Interface Using User Behavior Tree Model</td>
<td>496</td>
</tr>
<tr>
<td>Shuang Liang, Eddie Chan, George Baciu, and Rong-hua Li</td>
<td></td>
</tr>
<tr>
<td>Access Control for Web Services Based on Feedback and Decay</td>
<td>501</td>
</tr>
<tr>
<td>Shangzhu Jin and Jun Peng</td>
<td></td>
</tr>
<tr>
<td>Quantifying Randomness of Clinician Mobility and Interaction in Emergency Department Using Entropy</td>
<td>506</td>
</tr>
<tr>
<td>Min Zhang, Zhe Li, Xiaohui Kong, Jiale Zhang, and Vimla Patel</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Session A6 Cognitive Agents and Robots</th>
<th>511</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive Memory for Semantic Agents in Robotic Interaction</td>
<td>511</td>
</tr>
<tr>
<td>Sebastien Dourlen and Amar Ramdane-Cherif</td>
<td></td>
</tr>
<tr>
<td>Deterministic, Probabilistic, Fuzzy and Quantum Automata: Two Unifying Formulations</td>
<td>518</td>
</tr>
<tr>
<td>Wei Cheng and Fang Xu</td>
<td></td>
</tr>
<tr>
<td>Distinguishing Schizophrenic Patients from Healthy Controls Based on MRI Data: A Tensor Linear Discriminant Approach</td>
<td>524</td>
</tr>
<tr>
<td>Linchuan Zhang, Lubin Wang, Hui Shen, and Dewen Hu</td>
<td></td>
</tr>
<tr>
<td>Reinforcement Learning for Multi-agent Patrol Policy</td>
<td>530</td>
</tr>
<tr>
<td>Zhaohui Hu and Dongbin Zhao</td>
<td></td>
</tr>
</tbody>
</table>
EEG Feature Extraction and Pattern Classification based on Motor Imagery in Brain-Computer Interface
Ling Zou, Xinguan Wang, Guodong Shi, and Zhenghua Ma

Decision-Making in Fuzzy Environments using Ontological Control with Fuzzy Automata
Liang He, Witold Kinsner, and Nariman Sepehri

Session B6 Neural Networks and Applications
A Novel Online Self-organizing Fuzzy Neural Network for Function Approximation
Ning Wang, Chidong Qiu, Xiaobing Niu, and Zhengyu Xue

Quadratic Neural Unit is a Good Compromise between Linear Models and Neural Networks for Industrial Applications
Ivo Bukovsky, Homma Noriyasu, Ladislav Smetana, Ricardo Rodriguez, Martina Mironovova, and Stanislav Vrana

Novel Exponential Stability of Reaction–Diffusion Cohen–Grossberg Neural Networks
Zhanshan Wang, Jidong Wang, and Zhenwei Liu

Low-Rank Kernel Learning for Semi-supervised Clustering
Mahdieh S. Baghshah and Saeed B. Shouraki

Fuzzy Neural Network Control for Robot Manipulator Directly Driven by Switched Reluctance Motor
Booming Ge, Jihong Li, and T. de Almeida Anibal

Feedforward Neural Networks for Automated Classification
Ivan Jordanov and Antoniya Georgieva

Session C6 Symbiotic Computing
Perceptual Functions for Context-Awareness of an Office Worker
Yasuho Manabe, Hiromichi Saito, Kentuke Akiyama, Ryotaro Ikeda, Satoshi Kanda, and Kenji Sugawara

3D Symbiotic Space for Agent-aided Collaborative Work
Akira Sakatoku, Akihumi Kawato, Toshitaki Osada, Gen Kitagata, and Tetsuo Kitashita

Conversation Support System for People with Language Disorders - Making Topic List from Wikipedia
Yasuko Tamane, Hidenobu Ishida, Fumio Hattori, and Kiyoshi Yasuda

Improving the Accessibility and Efficiency of e-Government Processes
Claude Moulin and Marco Luca Sbodio

An Effective Acquisition Scheme of Sensor Data in Sensor Network for Healthcare Support
Yusuke Kobayashi, Satoru Izumi, Hideyuki Takahashi, Takuo Suganuma, Tetsuo Kinoshita, and Norio Shiratori

A Knowledge Filtering Scheme using Sensor Data for Symbiotic Healthcare Support System
Satoru Izumi, Yusuke Kobayashi, Hideyuki Takahashi, Takuo Suganuma, Tetsuo Kinoshita, and Norio Shiratori

Session A7 Cognitive Informatics Applications V
The Design of Awareness and Operation Module for the Symbiotic Applications
Shigeru Fujita, Kenji Sugawara, Cloud Moulin, and Jean-Paul Bartes

Who Dominates the Retinotectal Mapping?
Sanming Song and Hongxun Yao

An Effective Method to Discover Emerging Chance in Chance Discovery
Hao Wang, Yukio Ohsawa, Yoko Nishihara, and Lin Guo

Regularized Orthogonal Forward Feature Selection for Spectral Data
Fang Du, Yan-Jun Li, and Tie-Jun Wu

Decision Rule Steered Discriminant Analysis: a Paradigm of Unifying Dimension Reduction and Classification into a Framework
Jian Yang
Session B7 Cognitive Data Mining 659
Hypothesis Generation and Data Quality Assessment through Association Mining 659
Ping Chen and Walter Garcia

Online Causal Discovery 667
Kui Yu, Xindong Wu, and Hao Wang

Efficient Missing Data Imputation for Supervised Learning 672
Shichao Zhang, Xindong Wu, and Manlong Zhu

Semi-supervised Domain Adaptation for WSD: Using a Word-by-Word Model Selection Approach 680
Yuhang Guo, Wanzhi Che, Ting Liu, and Sheng Li

Effective Classification for Crater Detection: A Case Study on Mars 688
Jue Wang, Wei Ding, Barry Fradkin, Cuong H. Pham, Peter Sherman, Binh D. Tran, Dawei Wang, Yun Yang, and Tomasz F. Stepinski

Session C7 Evolutionary Computing 696
Evolutionary Data Mining Approaches for Rule-based and Tree-based Classifiers 696
Thomas Weise and Raymond Chiong

Applying River Formation Dynamics to the Steiner Tree Problem 704
Pablo Rabanal, Ismael Rodriguez, and Fernando Rubio

A Hybrid Harmony Search Algorithm to MRI Brain Segmentation 712
Osama Alta, Rajeswari Mandava, and Mohd E. Aziz

Using GP to Evolve Decision Rules for Classification in Financial Data Sets 720
Pu Wang, Edward Tsang, Thomas Weise, Ke Tang, and Xin Yao

Generic Cabling with Restrictions Based on Ant Colony Algorithm 728
Yunlong Wang and Guiming Luo

Session PS1: Cognitive Computing 733
Security Algorithm of Face Recognition based on Local Binary Pattern and Random Projection 733
Lingli Zhou and Jianghuang Lai

Some Features of Transmission Mechanisms in Bulletin Board System 739
WeiJie Li and Hongyun Bao

The Research on Predictive Control based on Characteristic Model in Die-less Drawing 744
Xiaojuan Ban, Feng Zhou, Chunxiang Liu, and Tian Jin

Multi-kernel SVM based Star Pattern Recognition for Celestial Navigation 748
Taiyang Liu, Shicheng Wang, Zhiguo Liu, Haibo Min, and Renbing Li

A Kind of Rational Preference 754
Zhenzhen Wang and Hancheng Xing

A Noise-Insensitive LLE Algorithm 760
Yong Zhou and Hongyun Guo

Exponential Stability of Bidirectional Associative Memory Neural Networks with Distributed Delays and Impulsive on Time Scales 766
Zunyue Qin and Chaolong Zhang

Extend Argumentation Frameworks based on Degree of Attack 771
Bingsheng Wang and Guiming Luo

Composing Fuzzy Cardinal Direction Relations 777
Bo Zhu, Xianzhong Dai, and Xinde Li
A k-hyperplane-based Neural Network for Non-Linear Regression
Hongmei He and Zengchang Qin

Greedy Iterative DHP Algorithm-based Near-optimal Control for a Class of Nonlinear Descriptor Systems with Actuator Saturating
Yanhong Luo, Zhenwei Liu, and Dongsheng Yang

Frisch Scheme Identification for Errors-in-Variables Systems
Dan Fan and Guiming Luo

Combining KNN Algorithm and Other Classifiers
Zhiyong Yan and Congfu Xu

Comparing Order Entry Subsequences Related to CPOE Correction Factors
Hidenao Abe and Shusaku Tsumoto

Fuzzy Multi-Class Support Vector Machines for Cooperative Network Intrusion Detection
Wei Zhang, Shaohua Teng, Hongle Du, and Xiaocong Li

Session PS2: Applied Cognitive Systems

Application of the Fuzzy Discrete Sliding Variable-structure System on Switched Reluctance Motor
Li Yan, Zhiming Dong, Bingxiang Zhong, and Aihua Li

Vibration Control of Vehicle Suspension with Five Degrees of Freedom
Jianmin Sun and Qinghui Zhou

Research of Scheduling Strategy based on Rendering Pretreatment Mechanism
Qi Wang, Yizhen Cao, and Yongbin Wang

Hiding Secret in Parity Check Bits by Applying XOR Function
Chi-Shiang Chan and Ching-Yun Chang

An Approach to On-line Moisture Content Measuring in Petroleum Products
Dedong Tang, Haiyan Tang, Zhiyu Mou, and Xinping Yan

A Data Hiding Scheme for Color Image using BTC Compression Technique
Yung-Chen Chou and Hon-Hang Chang

Passive Four-Channel Multilateral Shared Control Architecture in Teleoperation
Yuji Wang, Fuchun Sun, Huaping Liu, and Zidi Li

A DRM Model based on Proactive Secret Sharing Scheme for P2P Networks
Ling Ma, Shouxun Liu, and Yongbin Wang

CM-HMM: Inter-Residue Contact and HMM-profiles based Enzyme Subfamily Prediction and Structure Analysis
Siriwon Taewijit and Kitsana Waiyamai

Simulation for Strategy of Maximal Wind Energy Capture of Doubly Fed Induction Generators
Lepeng Song, Dedong Tang, Debiao Wang, and Hui Li

Weighting Imputation Methods and Their Evaluation under Shell-Neighbor Machine
Shichao Zhang and Manlong Zhu

A Modified Subband Post-filtering Approach for MVDR Beamformer
Yi Yang, Hui Song, Jia Liu, Xinguo Bao, and Qingsheng Yuan

Simulation Study of Two-order Large Inertia and Time-delay System Based on Active Disturbance Rejection Controller
Debiao Wang and Lepeng Song

PERICASA
Raghvendra Mall, Prakhar Jain, Vikram Pudi, and Bipin Indurkiya
Production Management and Data Processing System for the Textile Enterprise Based on Multi-Agent
Jingfeng Shao, Jinfu Wang, Songtao Liu, and Liping Yang

Session PS3: Cognitive Informatics
Concept Reduction on Interval Formal Concept Analysis
Zhou Wen, Yan Zhao, Yao Li, and Zhaoman Zhong
Articular Models for First-degree Paraconsistent Systems
Ray E. Jennings and Yue Chen
Localized Pairwise Constraint Proximal Support Vector Machine
Jinguo Zhao, Min Chen, Zhao Zhang, and Qingyun Luo
Modeling Gestalt Laws for Classification
Guihua Wen, Xingjiang Pan, Lijun Jiang, and Jun Wen
Hierarchical Multi-label Associative Classification (HMAC) using Negative Rules
Sawinee Sangsuriyuen, Sanparith Marukatat, and Kitsana Waiyamai
Predicting Embedding Strength in Audio Steganography
Mengyu Qiao, Andrew Sung, and Qingzhong Liu
Reports the Current Weather Conditions on Cell Phones using Web Services
Shelly Zhao and Lisa Fan
Cognitive Skills Promotion by Means of Collaborative Technology Web 2.0 Tools
Iolanda Bernabe-Munoz
Adaptive Imperialist Competitive Algorithm (AICA)
Marfan Abdechiri, Karim Faes, and Helena Bahrami
Vision Navigation for Driver Cognitive Model in ACT-R Architecture
Jie Cao and Hong Wang
Discrimination of the Imaging Quality based on the Sharpness and Illuminance Factor
Xue Wang and Yangqi Qu
Depression Sub-Health-State Scoring with Modified Lempel-Ziv Algorithm on Auricular Point NIRS Image
Wenshi Li
Application of RBF Network based on Artificial Immune Algorithm to Predict Gas Pipeline Load
Hong Liu, Qingheng Zeng, Min Yang, and Mujiao Fan
Two Decades’ Research on Decision-theoretic Rough Sets
Dun Liu, Huaxiong Li, and Xianzhong Zhou
Proposition Matrix Search Algorithm for Satisfiability Degree Computation
Jian Luo and Guiming Luo
Improvement of Bearing-only Tracking Fusion Strategy Based on Bionics with Infrared Sensor
Hui Chen and Zhanming Li

Author Index