Contents

Cloud and Crowd Based Learning ........................................ 1
Chun-Hsiung Tseng, Ching-Lien Huang, Yung-Hui Chen,
Chu-Chun Chuang, Han-Ci Syu, Yan-Ru Jiang, Fang-Chi Tsai,
Pin-Yu Su and Jun-Yan Chen

Artificial Neural Network Based Evaluation Method
of Urban Public Security ................................................. 7
Zheng Xu, Qingyuan Zhou, Haiyan Chen and Fangfang Liu

Building the Search Pattern of Social Media
User Based on Cyber Individual Model ................................. 15
Zheng Xu, Xiao Wei, Dongmin Chen, Haiyan Chen
and Fangfang Liu

Design of Health Supervision System Base on WBAN .................. 23
Xinli Zhou

The Analysis of Hot Topics and Frontiers of Financial
Engineering Based on Visualization Analysis ......................... 33
Liangbin Yang

An Efficient ACL Segmentation Method .................................. 43
YunBo Rao, XianShu Ding, Jianping Gou and Ying Ma

Image Haze Removal of Optimized Contrast Enhancement
Based on GPU ......................................................... 53
Che-Lun Hung, Zhaohui Ma, Chun-Yuan Lin
and Hsiao-Hsi Wang

Research of Thunderstorm Warning System Based on Credit
Scoring Model .................................................... 65
Xinli Zhou, LiangBin Yang and HaiFeng Hu
<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cloud-Based Marketing: Does Cloud Applications for Marketing Bring Positive Identification and Post-purchase Evaluation?</td>
<td>77</td>
</tr>
<tr>
<td>Ching-Wei Ho and Yu-Bing Wang</td>
<td></td>
</tr>
<tr>
<td>Decision Analyses of Medical Resources for Disabled Elderly Home Care: The Hyper Aged District in Taiwan</td>
<td>85</td>
</tr>
<tr>
<td>Lin Hui and Kuei Min Wang</td>
<td></td>
</tr>
<tr>
<td>The Research About Vehicle Recognition of Parallel Computing Based on GPU.</td>
<td>97</td>
</tr>
<tr>
<td>Zhiwei Tang, Yong Chen and Zhiqiang Wen</td>
<td></td>
</tr>
<tr>
<td>Pseudo Nearest Centroid Neighbor Classification</td>
<td>103</td>
</tr>
<tr>
<td>Hongxing Ma, Xili Wang and Jianping Gou</td>
<td></td>
</tr>
<tr>
<td>Recommended System for Cognitive Assessment Evaluation Based on Two-Phase Blue-Red Tree of Rule-Space Model: A Case Study of MTA Course</td>
<td>117</td>
</tr>
<tr>
<td>Yung-Hui Chen, Chun-Hsiung Tseng, Ching-Lien Huang, Lawrence Y. Deng and Wei-Chun Lee</td>
<td></td>
</tr>
<tr>
<td>A Algorithm of Detectors Generating Based on Negative Selection Algorithm.</td>
<td>133</td>
</tr>
<tr>
<td>Wu Renjie, Guo Xiaoling and Zhang Xiao</td>
<td></td>
</tr>
<tr>
<td>A Comparative Study on Disease Risk Model in Exploratory Spatial Analysis</td>
<td>141</td>
</tr>
<tr>
<td>Zhisheng Zhao, Xiao Zhang, Yang Liu, Junhua Liang, Jiawei Wang and Yaxu Liu</td>
<td></td>
</tr>
<tr>
<td>An Algorithm for Image Denoising Based on Adaptive Total Variation</td>
<td>155</td>
</tr>
<tr>
<td>Guo Xiaoling, Yang Jie and Zhang Xiao</td>
<td></td>
</tr>
<tr>
<td>Social Events Detection and Tracking Based on Microblog.</td>
<td>161</td>
</tr>
<tr>
<td>Guiliang Feng, Yiping Lu, Jing Qin and Xiao Zhang</td>
<td></td>
</tr>
<tr>
<td>Hongbin Yang, Jianhua Guo, Chao Liang, Zhou Lei and Changsheng Wang</td>
<td></td>
</tr>
<tr>
<td>Microblogging Recruitment Information Mining.</td>
<td>185</td>
</tr>
<tr>
<td>Jing Qin, Yiping Lu, Shuo Feng and Guiliang Feng</td>
<td></td>
</tr>
<tr>
<td>Community Trust Recommendation Based on Probability Matrix Factorization.</td>
<td>195</td>
</tr>
<tr>
<td>Xunfeng Li and Weimin Li</td>
<td></td>
</tr>
</tbody>
</table>
Robust Markov Random Field Model for Image Segmentation .................................................. 205
Taisong Xiong and Yuanyuan Huang

Community Clustering Based on Weighted Informative Graph ........................................... 215
Yi Xu, Yingning Gao and Weimin Li

A Data Clustering Algorithm Using Cuckoo Search ............................................................... 225
Mingru Zhao, Hengliang Tang, Jian Guo and Yuan Sun

The Application of Bacteria Swarm Optimization Algorithm in Site Choice of Logistics Center ........................................... 231
Mingru Zhao, Hengliang Tang, Jian Guo and Yuan Sun

SIDA: An Information Dispersal Based Encryption Algorithm .................................................. 239
Zhi-ting Yu, Quan Qian, Rui Zhang and Che-Lun Hung

Software Behavior Analysis Method Based on Behavior Template ........................................... 251
Lai Yingxu, Zhao Yiwen and Ye Tao

Formalizing Dynamic Service Interaction Based on Pi-Calculus .............................................. 261
Yaya Liu, Jiulei Jiang and Wenwen Liu

Applications of Video Structured Description Technology for Traffic Violation Monitoring ........................................... 271
Qianjin Tang, Zheng Xu, Zhizong Wu, Yixuan Wu and Lin Mei

Research of Mining Multi-level Association Rule Models ....................................................... 279
Wen-Hsing Kao, Chin-Wen Lo, Kuo-Pin Li, Hsien-Wei Yang and Jeng-Chi Yan

Research of the Dimension Combination Strategy Model ....................................................... 289
Bo-Shen Liou, Ruei-Yang Lin, Kuo-Pin Li, Wen-Hsing Kao and Jeng-Chi Yang

Short Latency Bias in Latency Matrix Completion ................................................................. 301
Cong Wang, Min LI and Yan Yang

Facial Feature Extraction Based on Weighted ALW and Pulse-Coupled Neural Network ........................................... 311
Junhua Liang, Zhisheng Zhao, Xiao Zhang, Yang Liu and Xuan Wang

Event Representation and Reasoning Based on SROIQ and Event Elements Projection ............ 325
Wei Liu, Ning Ding, Yue Tan, Yujia Zhang and Zongtian Liu
<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Research and Application of Data Warehouse’s Model Design</td>
<td>337</td>
</tr>
<tr>
<td>Zhangzhi Zhao, Jing Li, Yongfei Ye, Yang Liu and Yaxu Liu</td>
<td></td>
</tr>
<tr>
<td>Question Recognition Based on Subject</td>
<td>353</td>
</tr>
<tr>
<td>Li-fang Huo, Li-ming Zhang and Xi-qing Zhao</td>
<td></td>
</tr>
<tr>
<td>Development of a Mobile Augmented Reality System to Facilitate Real-World Learning</td>
<td>363</td>
</tr>
<tr>
<td>Kai-Yi Chin, Ko-Fong Lee and Hsiang-Chin Hsieh</td>
<td></td>
</tr>
<tr>
<td>A Simple Randomized Algorithm for Complete Target Coverage Problem in Sensor Wireless Networks</td>
<td>373</td>
</tr>
<tr>
<td>Weizhong Luo, Zhaoquan Cai and Zhi Zeng</td>
<td></td>
</tr>
<tr>
<td>A Novel Enveloped-Form Feature Extraction Technique for Heart Murmur Classification</td>
<td>379</td>
</tr>
<tr>
<td>HaoDong Yao, BinBin Fu, MingChui Dong and Mang I. Vai</td>
<td></td>
</tr>
<tr>
<td>Research on Network Security Strategy Model</td>
<td>389</td>
</tr>
<tr>
<td>Anyi Lan, Bo Li, Rongsheng Huang, Xiao Zhang and Guiliang Feng</td>
<td></td>
</tr>
<tr>
<td>Investigating on Radioactivity of LBE and Pb in ADS Spallation Target</td>
<td>395</td>
</tr>
<tr>
<td>Yaling Zhang, Xuesong Yan, Xunchao Zhang, Jianqi Chen, Qingguo Zhou and Lei Yang</td>
<td></td>
</tr>
<tr>
<td>Design of Farmland Environment Remote Monitoring System Based on ZigBee Wireless Sensor Network</td>
<td>405</td>
</tr>
<tr>
<td>Yongfei Ye, Li Hao, Minghe Liu, Hongxi Wu, Xiao Zhang and Zhisheng Zhao</td>
<td></td>
</tr>
<tr>
<td>Attractions and Monuments Touring System Based on Cloud Computing and Augmented Reality</td>
<td>417</td>
</tr>
<tr>
<td>Deqiang Han, Zongxia Wang and Qiang Zhang</td>
<td></td>
</tr>
<tr>
<td>Constructing Weighted Gene Correlation Network on GPUs</td>
<td>429</td>
</tr>
<tr>
<td>Guanghui Yang, Sheng Zhang, Yuan Tian, Ping Lin, Jiang-Feng Wan, Qingguo Zhou and Lei Yang</td>
<td></td>
</tr>
<tr>
<td>Design of Scalable Control Plane via Multiple Controllers</td>
<td>441</td>
</tr>
<tr>
<td>Wenbo Chen, Xining Tian and Zhihao Shang</td>
<td></td>
</tr>
<tr>
<td>Research on Learning Record Tracking System Based on Experience API</td>
<td>451</td>
</tr>
<tr>
<td>Xinghua Sun, Yongfei Ye, Li Hao, Zexin An and Xiaoyu Wang</td>
<td></td>
</tr>
</tbody>
</table>
An EF6 Code-First Approach Using MVC Architecture Pattern for Watershed Data Download, Visualization and Analysis System Development Based on CUAHSI-HIS  459
Rui Gao, Yanyun Nian, Lu Chen and Qingguo Zhou

Student-t Mixture Modelling for Image Segmentation with Markov Random Field  471
Taisong Xiong, Yuanyuan Huang and Xin Luo

Integrated Genetic Algorithm and Fuzzy Logic for Planning Path of Mobile Robots  481
Shixuan Yao, Xiangrong Wang and Baoliang Li

Characterization of Noise Contaminations in Realistic Heart Sound Acquisition  491
Jun Huang, Booma Devi Sekar, Ran Guo, MingChui Dong and XiangYang Hu

Independent Component Analysis of Space-Time Patterns of Groundwater System  503
Chin Tsai Hsiao, Jui Pin Tsai and Yu Wen Chen

Analysis of the Status Quo of MOOCs in China  515
Li Hao, Xinghua Sun, Chunlei Zhang and Xifeng Guo

Detection for Different Type Botnets Using Feature Subset Selection  523
Kuan-Cheng Lin, Wei-Chiang Li and Jason C. Hung

Rotation Invariant Feature Extracting of Seal Images Based on PCNN  531
Naidi Liu, Yongfei Ye, Xinghua Sun, Junhua Liang and Peng Sun

The Taguchi System-Two Steps Optimal Algorithm Based Neural Network for Dynamic Sensor Product Design  541

Accurate Analysis of a Movie Recommendation Service with Linked Data on Hadoop and Mahout  551
Meng-Yen Hsieh, Gui-Lin Li, Ming-Hong Liao, Wen-Kuang Chou and Kuan-Ching Li

A Method of Event Ontology Mapping  561
Xu Wang, Wei Liu, Yujia Zhang, Yue Tan and Feijing Liu

A Research on Multi-dimensional Multi-attribute String Matching Mechanism for 3D Motion Databases  575
Edgar Chia-Han Lin
All-Digital High-Speed Wide-Range Binary Detecting Pulsewidth Lock Loops ........................................... 705 Po-Hui Yang, Jing-Min Chen and Zi-Min Hong

A BUS Topology Temperature Sensor Cell Design with System in Package Application ........................................ 713 Po-Hui Yang, Jing-Min Chen and Ching-Ken Chen

The Off-Axis Parabolic Mirror Optical Axis Adjustment Method in a Wedge Optical Plate Lateral Shearing Interferometer . . . 721 Feng-Ming Yeh, Der-Chin Chen, Shih-Chieh Lee and Ya-Hui Hsieh

Two-Mirror Telescope Optical Axis Alignment by Additive Color Mixing Method ........................................... 731 Feng-Ming Yeh, Der-Chin Chen, Shih-Chieh Lee and Ya-Hui Hsieh

Design of Relay Lens Based on Zero Seidel Aberrations ............... 743 Kuang-Lung Huang, Yu-Wei Chan, Jin-Jia Chen and Te-Shu Liu

The Optical Spectra Analysis of 4 LED White-Light Sources Passing Through Different Fogs .............................. 753 Chien-Sheng Huang, Ching-Huang Lin, Guan-Syuan Hong and Hsuan-Fu Wang


Two-Wavelength Optical Microscope Optical Axis Adjustment by Five Incident Parallel Laser Beams ....................... 773 Feng-Ming Yeh, Der-Chin Chen, Shih-Chieh Lee and Wei-Hsin Chen

The Correlation Analysis Between the Non-contact Intraocular Pressure and Diopter ........................................ 783 Feng-Ming Yeh, Der-Chin Chen, Shih-Chieh Lee and Ching-Chung Chen

Automated Tool Trajectory Planning for Spray Painting Robot of Free-Form Surfaces ........................................ 791 Wei Chen and Yang Tang

The Research of Analysis Addiction of Online Game ............... 801 Jason C. Hung, Min-Hui Ding, Wen-Hsing Kao, Hui-Qian Chen, Guey-Shya Chen and Min-Feng Lee
Parameter Estimation of Trailing Suction Hopper
Dredger Dredging Model by GA ............................... 811
Zhen Su and Wei Yuan

CPP Control System Design of Ship Based on Siemens PLC .... 817
Liang Qi and Shengjian Huang

The Surface Deformation Prediction of Ship-Hull Plate
for Line Heating .................................................. 827
Liang Qi, Feng Yu, Junjie Song and Xian Zhao

The Framework Research of the Internet of Things
in Dispatching Emergency Supplies ............................ 841
Tongjuan Liu, Yanlin Duan and Yingqi Liu

Simulation and Optimization of the AS/RS Based
on Flexsim .................................................................. 855
Tongjuan Liu, Yanlin Duan and Yingqi Liu

Design and Experiment of Control System for Underwater Ocean
Engineering Structure Inspection and Cleaning
Remotely Operated Vehicle ........................................ 865
Haijian Liu, Zhenwen Song, Song Liang, Lu Chang, Renyi Lin,
Wei Chen and Qingjun Zeng

Using Experiment on Social Learning Environment
Based on an Open Source Social Platform .................... 881
Jing-De Weng, Martin M. Weng, Chun-Hong Huang
and Jason C. Hung

User Authentication Mechanism on Wireless Medical
Sensor Networks ...................................................... 887
Wei-Chen Wu and Horng-Twu Liaw

Application of Cloud Computing for Emergency Medical
Services: A Study of Spatial Analysis and Data Mining
Technology ........................................................... 899
Jui-Hung Kao, Feipei Lai, Bo-Cheng Lin, Wei-Zen Sun,
Kuan-Wu Chang and Ta-Chien Chan

Social Event Detection and Analysis Using Social
Event Radar .......................................................... 917
Jin-Gu Pan and Ping-I Chen

Social Network and Consumer Behavior Analysis:
A Case Study in the Retail Store ............................... 927
Pin-Liang Chen, Ping-Che Yang and Tsun Ku
Novel Scheme for the Distribution of Flyers Using a Real Movement Model for DTNs ........................................... 937
Tzu-Chieh Tsai and Ho-Hsiang Chan

A Study of Two-Dimensional Normal Class Grouping ............... 949
Ruey-Gang Lai and Cheng-Hsien Yu

Visualized Comparison as a Correctness Indicator for Music Sight-Singing Learning Interface Evaluation—A Pitch Recognition Technology Study ........................................... 959
Yu Ting Huang and Chi Nung Chu

A Fuzzy Genetic Approach for Optimization of Online Auction Fraud Detection ........................................... 965
Cheng-Hsine Yu

A Study on the Use Intention of After School Teachers Using Interactive e-Learning Systems in Teaching .......... 975
Chih-Ching Ho and Horng-Twu Liaw

Bibliometric Analysis of Emerging Trends in High Frequency Trading Research ........................................... 985
Jerome Chih-Lung Chou, Mike Y.J. Lee and Chia-Liang Hung

Interactive Performance Using Wearable Devices:
Technology and Innovative Applications ................................ 993
Tzu-Chieh Tsai, Gon-Jong Su and Chung-Yu Cheng

Usability Evaluation of Acoustic-Oriented Services on Mouse Manipulation: Can Manipulation with Dual Senses Be Good? ........................................... 1007
Chi Nung Chu

Effect of We-Intention on Adoption of Information System Embedding Social Networking Technology: A Case of Cloud Drive ........................................... 1017
Jerome Chih-Lung Chou

Improving Project Risk Management of Cloud CRM Using DANP Approach ........................................... 1023
You-Shyang Chen, Chien-Ku Lin and Huan-Ming Chuang

Improving Project Risk Management by a Hybrid MCDM Model Combining DEMATEL with DANP and VIKOR Methods—An Example of Cloud CRM ........................................... 1033
Chien-Ku Lin, You-Shyang Chen and Huan-Ming Chuang
Using VIKOR to Improve E-Service Quality Performance in E-Store ........................................... 1041
Chien-Ku Lin, You-Shyang Chen, Huan-Ming Chuang and Chyuan-Yuh Lin

Study on the Intellectual Capital and Firm Performance .................. 1051
Chiung-Lin Chiu, You-Shyang Chen and Mei-Fang Yang

Voluntary Disclosure and Future Earnings .................................. 1059
Chiung-Lin Chiu and You-Shyang Chen

A Smart Design of Pre-processing Classifier for Impulse Noises on Digital Images ........................................... 1065
Jieh-Ren Chang, Hong-Wun Lin and Huan-Chung Chen

An Effective Machine Learning Approach for Refining the Labels of Web Facial Images ........................................... 1073
Jieh-Ren Chang and Hung-chi Juang

Using the Data-Service Framework to Design a Distributed Multi-Levels Computer Game for Insect Education .............. 1085
Chih-Min Lo and Hsiu-Yen Hung

Financial Diagnosis System (FDS) for Food Industry Listed in the Taiwan Stock Exchange (TWSE) .................. 1091
Cheng-Ming Chang

Classification Rule Discovery for Housing Purchase Life Cycle .......................................................... 1097
Bo-Han Wu and Sun-Jen Huang

Algorithms of AP+ Tree Operations for IoT System ................. 1107
Qianjin Tang, Zhizong Wu, Yixuan Wu and Jinfeng Ma

Dynamic Storage Method of Big Data Based on Layered and Configurable Technology .......................... 1115
Wenjuan Liu, Shunxiang Zhang and Zheng Xu

MIC-Based Preconditioned Conjugate Gradient Method for Solving Large Sparse Linear Equations .................. 1123
Zhiwei Tang, Hailang Huang, Hong Jiang and Bin Li

Modeling and Assessing the Helpfulness of Chinese Online Reviews Based on Writing Behavior .................. 1131
Chenglei Qin, Xiao Wei, Li Xue and Hongbing Cao

The Average Path Length of Association Link Network .............. 1139
Shunxiang Zhang, Xiaosheng Wang and Zheng Xu
The Intelligent Big Data Analytics Framework for Surveillance Video System ........................................ 1147
Zheng Xu, Yang Liu, Zhenyu Li and Lin Mei

The Intelligent Video Processing Platform Using Video Structural Description Technology for the Highway Traffic .................................................. 1153
Zheng Xu, Zhiguo Yan, Zhenyu Li and Lin Mei

The Scheme of the Cooperative Gun-Dome Face Image Acquisition in Surveillance Sensors .................................................. 1159
Zhiguo Yan, Zheng Xu, Huan Du and Lin Mei

Vehicle Color Recognition Based on CUDA Acceleration .................................................. 1167
Zhiwei Tang, Yong Chen, Bin Li and Liangyi Li

Video Retargeting for Intelligent Sensing of Surveillance Devices .................................................. 1173
Huan Du, Zheng Xu and Zhiguo Yan

Web Knowledge Acquisition Model Based on Human Cognitive Process .................................................. 1179
Xiaobo Yin and Xiangfeng Luo

An Investigation on the Relationship Among Employees’ Job Stress, Satisfaction and Performance .................................................. 1185
Che-Chang Chang and Fang-Tzu Chen

Research on Influence Factors of the Formation of Virtual Innovation Clusters .................................................. 1193
Dong Qiu and Qiu-Ming Wu

Research on the Development Path of New-Type R&D Organization in Guangdong Province, China .................................................. 1201
Li Huang

Analysis of Technology Diffusion Among Agricultural Industry Clusters by Game Theory .................................................. 1209
Chun-Hua Zheng and He-Liang Huang

Weakness of Zhang-Wang Scheme Without Using One-Way Hash Function .................................................. 1217
Zhi-Pan Wu

Weakness of an ElGamal-Like Cryptosystem for Enciphering Large Messages .................................................. 1225
Jie Fang, Chenglian Liu and Jieling Wu

Study of Kindergartner Work Pressure Based on Fuzzy Inference System .................................................. 1233
Jie Fang
Comment on ‘The Hermite-Hadamard Inequality for $R$-Convex Functions’ ........................................ 1245
Zhi-Pan Wu

Author Index ......................................................... 1249
Frontier Computing
Theory, Technologies and Applications
Hung, J.; Yen, N.Y.; Li, K.-C. (Eds.)
2016, XXII, 1252 p. 507 illus., 135 illus. in color. In 2 volumes, not available separately., Hardcover
ISBN: 978-981-10-0538-1