## Contents

### Algorithms and Programming

Ford Motor Side-View Recognition System Based on Wavelet Entropy and Back Propagation Neural Network and Levenberg-Marquardt Algorithm .................................................. 3  
  Wen-Juan Jia, Shuihua Wang, Huimin Lu, Ying Shao, Elizabeth Lee,  
  and Yu-Dong Zhang

Intrusion Detection Based on Self-adaptive Differential Evolution Extreme Learning Machine with Gaussian Kernel .................................................. 13  
  Junhua Ku and Bing Zheng

Prediction for Passenger Flow at the Airport Based on Different Models .... 25  
  Xia Liu, Xia Huang, Lei Chen, Zhao Qiu, and Ming-rui Chen

Election Based Pose Estimation of Moving Objects ................................. 41  
  Liming Gao and Chongwen Wang

A Novel Topology Reconfiguration Backtracking Algorithm  
for 2D REmesh Networks-on-Chip .................................................. 51  
  Na Niu, Fang-Fa Fu, Hang Li, Feng-Chang Lai, and Jin-Xiang Wang

User Behaviour Authentication Model Based on Stochastic Petri Net  
in Cloud Environment .................................................. 59  
  Peng Li, Cheng Yang, He Xu, Ting Fung LAU, and Ruchuan Wang

Performance Prediction of Spark Based on the Multiple Linear  
Regression Analysis .................................................. 70  
  Lu Dong, Peng Li, He Xu, Baozhou Luo, and Yu Mi

CTS-SOS: Cloud Task Scheduling Based on the Symbiotic  
Organisms Search .................................................. 82  
  Zhenpeng Liu, Xiaodan Liu, Yawei Dong, Xuan Zhao, and Bin Zhang

Exploration of Heuristic-Based Feature Selection on Classification  
Problems .................................................. 95  
  Qi Qi, Ni Li, and Weimin Li

AGSA: Anti-similarity Group Shilling Attacks ................................. 108  
  Peng Wang, Lingtao Qi, Haiping Huang, Feng Li, and Congxiang Yu
H∞ Filtering Design for a Class of Distributed Parameter Systems with Randomly Occurring Sensor Faults and Markovian Channel Switching .................................................. 117
   Huihui Ji and Baotong Cui

The Study of the Seabed Side-Scan Acoustic Images Recognition Using BP Neural Network ................................................................. 130
   Hongyan Xi, Lei Wan, Mingwei Sheng, Yueming Li, and Tao Liu

Node Localization of Wireless Sensor Network Based on Secondary Correction Error .......................................................... 142
   Xiaoxu Ma, Wenju Liu, and Ze Wang

Optimizations of the Whole Function Vectorization Based on SIMD Characteristics .......................................................... 152
   Yingying Li, Yuchen Gao, Dong Wang, Yanbing Li, and Jinlong Xu

A Stacked Denoising Autoencoders Based Collaborative Approach for Recommender System .......................................................... 172
   Baojun Niu, Dongsheng Zou, and Yafeng Niu

Research on Adaptive Canny Algorithm Based on Dual-Domain Filtering .......................................................... 182
   Xiaojiong Shen, Xiaoyu Duan, Daojun Han, and Wanli Yuan

A Dynamic Individual Recommendation Method Based on Reinforcement Learning .......................................................... 192
   Daojun Han, Xiaojiong Shen, Tian Gan, and Ruqing Cai

Research on the Pre-distribution Model Based on Seesaw Model .......................................................... 201
   Mingshan Xie, Yanfang Deng, Yong Bai, Mengxing Huang, and Zhuhua Hu

An Efficient Filtration Method Based on Variable-Length Seeds for Sequence Alignment .......................................................... 214
   Ruidong Guo, Haoyu Cheng, and Yun Xu

An Optimized Fusion Method for Double-Wearable-Wireless-Band Platform on Cloud-Health Application .......................................................... 224
   Wenchao Xu, Yanbo Liu, Yanqin Yang, Xiaoshuang Ning, Tianxing Chu, and Hongzhi Song

Research on Concept Drift Detection for Decision Tree Algorithm in the Stream of Big Data .......................................................... 237
   Shangdong Liu, Lili Lu, Yongpan Zhang, Tong Xin, Yimu Ji, and Ruchuan Wang
<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Review of Various Strategies for Gateway Discovery Mechanisms for Integrating Internet-MANET</td>
<td>247</td>
</tr>
<tr>
<td>Lin Yang, Zhijie Han, Rui Wang, and Yong Hang Yan</td>
<td></td>
</tr>
<tr>
<td>Research on Extraction Algorithm of Palm ROI Based on Maximum Intrinsic Circle</td>
<td>258</td>
</tr>
<tr>
<td>Gang Liu and Jing Zhang</td>
<td></td>
</tr>
<tr>
<td>Power Adaptive Routing Scheme with Energy Hole Avoidance for Underwater Acoustic Networks</td>
<td>268</td>
</tr>
<tr>
<td>Xian-yi Chen and Guo-lan Lin</td>
<td></td>
</tr>
<tr>
<td>A Lightweight Algorithm for Computing BWT from Suffix Array in Disk</td>
<td>279</td>
</tr>
<tr>
<td>Jing Yi Xie, Bin Lao, and Ge Nong</td>
<td></td>
</tr>
<tr>
<td>$H_\infty$ Filtering in Mobile Sensor Networks with Missing Measurements and Quantization Effects</td>
<td>290</td>
</tr>
<tr>
<td>Xueming Qian and Baotong Cui</td>
<td></td>
</tr>
<tr>
<td>A Cost-Effective Wide-Sense Nonblocking k-Fold Multicast Network</td>
<td>301</td>
</tr>
<tr>
<td>Gang Liu, Qiuming Luo, Cunhuang Ye, and Rui Mao</td>
<td></td>
</tr>
<tr>
<td>The Design of General Course-Choosing System in Colleges and Universities</td>
<td>311</td>
</tr>
<tr>
<td>Chunmin Qiu, Shaojie Du, and Bailu Zhao</td>
<td></td>
</tr>
<tr>
<td>Research on Vectorization Technology for Irregular Data Access</td>
<td>321</td>
</tr>
<tr>
<td>Wang Qi, Han Lin, Yao Jinyang, and Liu Hui</td>
<td></td>
</tr>
<tr>
<td>A New Simple Algorithm for Scrambling</td>
<td>335</td>
</tr>
<tr>
<td>Xing Zeng, Xiulai Li, Yali Luo, and Mingrui Chen</td>
<td></td>
</tr>
<tr>
<td>The Framework of Relative Density-Based Clustering</td>
<td>343</td>
</tr>
<tr>
<td>Zelin Cui and Hong Shen</td>
<td></td>
</tr>
<tr>
<td>Efficient Algorithms for VM Placement in Cloud Data Center</td>
<td>353</td>
</tr>
<tr>
<td>Jiahuaui Wu and Hong Shen</td>
<td></td>
</tr>
<tr>
<td>Weighted One-Dependence Forests Classifier</td>
<td>366</td>
</tr>
<tr>
<td>Guojing Zhong and Limin Wang</td>
<td></td>
</tr>
<tr>
<td>Research and Realization of Commodity Image Retrieval System Based on Deep Learning</td>
<td>376</td>
</tr>
<tr>
<td>Cen Chen, Rui Yang, and Chongwen Wang</td>
<td></td>
</tr>
<tr>
<td>An Improved Algorithm Based on LSB</td>
<td>386</td>
</tr>
<tr>
<td>Yali Luo, Xiulai Li, Chaofan Chen, and Mingrui Chen</td>
<td></td>
</tr>
</tbody>
</table>
A Report on the Improvement of Information Technology Capability of Teachers in Primary and Middle Schools in Hainan Province

JingYu Luo, Zhao Qiu, JianZheng Hu, and XiaWen Zhang

The Research of the Airport Retail Layout Based on the Location Model

Han-tao Yang

Research on Model and Method of Relevance Feedback Mechanism in Image Retrieval

Xinying Li, Taijun Li, Feng Li, and Hongli Wu

Processing Redundancy in UML Diagrams Based on Knowledge Graph

Yirui Jiang, Yucong Duan, Mengxing Huang, Mingrui Chen, Jingbin Li, and Hui Zhou

An Automatic Fall Detection System Based on Derivative Dynamic Time Warping

Hong Yang, Yanqin Yang, Wenchao Xu, and Yuxin Pang

On Signal Timing Optimization in Isolated Intersection Based on the Improved Ant Colony Algorithm

Huang Min

Experiments on Neighborhood Combination Strategies for Bi-objective Unconstrained Binary Quadratic Programming Problem

Li-Yuan Xue, Rong-Qiang Zeng, Wei An, Qing-Xian Wang, and Ming-Sheng Shang

Porting Referential Genome Compression Tool on Loongson Platform

Zheng Du, Chao Guo, Yijun Zhang, and Qiuming Luo

Statistics of the Number of People Based on the Surveillance Video

Zhao Qiu, ShiYao Lei, JianZheng Hu, and JingYu Luo

Differential Privacy in Power Big Data Publishing

Ping Kong, Xiaochun Wang, Boyi Zhang, and Yidong Li

Parallel Architectures

Parallel Aligning Multiple Metabolic Pathways on Hybrid CPU and GPU Architectures

Yiran Huang, Cheng Zhong, Jinxiong Zhang, Ye Li, and Jun Liu

Speeding Up Convolution on Multi-cluster DSP in Deep Learning Scenarios

Deng Wenqi, Yang Zhenhao, Lu Maohui, Wang Gai, Yang JiangPing, and Zheng Qilong
Optimization Scheme Based on Parallel Computing Technology       504
   Xiulai Li, Chaofan Chen, Yali Luo, and Mingrui Chen

Research on Client Adaptive Technology Based on Cloud Technology   514
   Xiaojing Zhu

Resource Allocation and Energy Management Based on Particle
Swarm Optimization                                                522
   Gang Mei, Mingrui Chen, and Xing Zhen

A Parallel Clustering Algorithm for Power Big Data Analysis        533
   Xiangjun Meng, Liang Chen, and Yidong Li

Customized Filesystem with Dynamic Stripe Strategies
on Lustre-Based Hadoop                                              541
   Hongbo Li, Yuxuan Xing, Nong Xiao, Zhiguang Chen, and Yutong Lu

Research on Optimized Pre-copy Algorithm of Live Container Migration
in Cloud Environment                                                554
   Huqing Nie, Peng Li, He Xu, Lu Dong, Jinquan Song, and Ruchuan Wang

A Cost Model for Heterogeneous Many-Core Processor                 566
   Yanbing Li, Qi Wang, Yingying Li, Lin Han, Yuchen Gao, and Qing Mu

Scalable K-Order LCP Array Construction for Massive Data           579
   Yi Wu, Ling Bo Han, Wai Hong Chan, and Ge Nong

A Load Balancing Strategy for Monte Carlo Method in PageRank Problem . 594
   Bo Shao, Siyan Lai, Bo Yang, Ying Xu, and Xiaola Lin

Experiences of Performance Optimization for Large Eddy Simulation
on Intel MIC Platforms                                             610
   Zhengxiong Hou, Chengwen Zhong, Christian Perez, Qing Zhang,
   and Yunlan Wang

Author Index                                                     627
Parallel Architecture, Algorithm and Programming
8th International Symposium, PAAP 2017, Haikou, China, June 17-18, 2017, Proceedings
Chen, G.; Shen, H.; Chen, M. (Eds.)
2017, XV, 629 p. 299 illus., Softcover
ISBN: 978-981-10-6441-8