

2017 IEEE/ACIS 16th International Conference on Computer and Information Science (ICIS 2017)

**Wuhan, China
24-26 May 2017**

Pages 453-909



**IEEE Catalog Number: CFP17CIS-POD
ISBN: 978-1-5090-5508-1**

**Copyright © 2017 by the Institute of Electrical and Electronics Engineers, Inc.
All Rights Reserved**

Copyright and Reprint Permissions: Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

****** This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.***

IEEE Catalog Number:	CFP17CIS-POD
ISBN (Print-On-Demand):	978-1-5090-5508-1
ISBN (Online):	978-1-5090-5507-4

Additional Copies of This Publication Are Available From:

Curran Associates, Inc
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: (845) 758-0400
Fax: (845) 758-2633
E-mail: curran@proceedings.com
Web: www.proceedings.com

CURRAN ASSOCIATES INC.
proceedings
.com

Table of Contents

Keynote	1
Smart Grid, Smart Transportation, and Smart City: Where We Are?	
<i>Chao Lu</i>	1
Internet of Thing Applications and Components in Korea	
<i>Haeng Kon Kim</i>	
Communication Networks and Systems	5
A Secure Contact Protocol for Delay Tolerant Networks	
<i>Manghui Tu, Kyle William Riordan, Geyang Xie, Shuhui Yang</i>	5
An Improved Link Prediction Algorithm Based on Degrees and Similarities of Nodes	
<i>Qingshuang Sun, Rongjing Hu, Zhao Yang, Yabing Yao, Fan Yang</i>	13
A Stateful Multicast Key Distribution Protocol Based on Identity-based Encryption	
<i>Yunyun Wu, Jing Liu, Jingyu Hou, Shaowen Yao</i>	19
A Temporal Graph Model based Power Aware Routing Algorithm in Deep-space Networks	
<i>Yang Song, Lixiang Liu, Jianzhou Chen</i>	25
An Implementation of Access-Control Protocol for IoT Home Scenario	
<i>Xiaoyang Wu, Ron Steinfeld, Joseph Liu, Carsten Rudolph</i>	31
UWB Signal Detection Based on Wavelet Packet and FHN Model	
<i>Bowen Chen, Lei Jiang, Qun Zhang</i>	39
CSEP: Circular Shifting Encryption Protocols for Location Privacy Protection	
<i>Di Chen, Hao Li, Shilei Zhou</i>	45
Two-scale Geographic Back-pressure Algorithm for Deep Space Networks	
<i>Zhenghui Liu, Lixiang Liu, Jianzhou Chen</i>	51
Stochastic Radio Interferometric Positioning with Unsynchronized Modulated Signals in Wireless Sensor Networks	
<i>Ruiling Gao, Wei-Tse Sun, Alva Couch, Chorong Hwa Chang</i>	57
The Restricted Minimum Single Source Shortest Path Tree Expansion Problem	
<i>Haiyan Wang, Weiqi Deng, Binchao Huang, Jianping Li</i>	63
Improved Joint Antenna Selection and User Scheduling for Massive MIMO Systems	
<i>Yuhan Dong, Yuanyuan Tang, Kai Zhang</i>	69
Visual and Multimedia Computing	75
3D Visual Correlation Model for Wireless Visual Sensor Networks	
<i>Xiaotao Yang, Yingyou Wen, Mingyang Zhang, Hong Zhao</i>	75
Fusion of LBP and HOG Using Multiple Kernel Learning for Infrared Face Recognition	
<i>Zhihua Xie, Peng Jiang, Shuai Zhang</i>	81
Generation of View-Dependent Textures for an Inaccurate Model	
<i>Zhen Wang, Weidong Geng</i>	85
Data Mining, Data Warehousing & Database	91
IoTs for Capturing and Mastering Massive Data Online Learning Courses	
<i>Alexander Muriuki Njeru, Mwana Said Omar, Sun Yi</i>	91
Online Education Performance Prediction via Time-related Features	
<i>Bowei Hong, Zhiqiang Wei, Yongquan Yang</i>	95
A Forecast for Bicycle Rental Demand Based on Random Forests and Multiple Linear Regression	
<i>YouLi Feng, ShanShan Wang</i>	101

Simultaneous Opinion Lexicon Expansion and Product Feature Extraction <i>Myat Su Wai, Sint Sint Aung</i>	107
A Hybrid Approach for Urban Expressway Traffic Incident Duration Prediction with Cox Regression and Random Survival Forests Models <i>Axiang Ke, Zhen Gao, Rongjie Yu, Min Wang, Xuesong Wang</i>	113
An improved Fuzzy Mutual Information Feature Selection for Classification Systems <i>Liwei Wang, Omar A. M. Salem</i>	119
A Computational Method for Identification of Disease-associated Non-coding SNPs in Human Genome <i>Jiuqiang Han, Rong Li, Xinman Zhang, Hongqiang Lv, Dexing Zhong</i>	125
Robotics Data Real-Time Management Based on NoSQL Solution <i>Afef Gueidi, Hamza Gharsellaoui, Samir Ben Ahmed</i>	131
Measuring the Distance of Moving Objects from Big Trajectory Data <i>Khaing Phyto Wai, Nwe Nwe</i>	137
Target Oriented Tweets Monitoring System during Natural Disasters <i>Si Si Mar Win, Than Nwe Aung</i>	143
Sentiment Analysis of Students' Comment Using Lexicon Based Approach <i>Khin Zezawar Aung, Nyein Nyein Myo</i>	149
Enhanced Frequent Itemsets Based on Topic Modeling in Information Filtering <i>Than Than Wai, Sint Sint Aung</i>	155
Utilizing Latent Class Logit Model to Predict Crash Risk <i>Zhiqiang Huang, Zhen Gao, Rongjie Yu, Xuesong Wang, Kui Yang</i>	161
Algorithm Study under Big Data Environment of Personalized Recommendation Based on User Interest Model <i>Qingju Guo, Wentian Ji, Renyun Zhou</i>	167
A Spatial-Temporal Model to Improve PM2.5 Inference <i>Hui Wang, Yuhan Dong, Kai Zhang</i>	173
Speech and Signal Processing	179
Auditory Mask Estimation by RPCA for Monaural Speech Enhancement <i>Wenhua Shi, Xiongwei Zhang, Xia Zou, Wei Han, Gang Min</i>	179
A Parallel Image Processing Platform based on Multi-Core DSP <i>Guodong Wang, Xiaojian Liu</i>	185
Real-time Image Detail Enhancement Implementing on Multi-core DSP Platform <i>Guodong Wang, Yue Cheng, Lei Zhang, Zhengjun Zhai</i>	191
Management Information Systems	197
Management Information Systems for Advertisement based on Online-to-Offline Strategy <i>Yang Xu, Fei Teng</i>	197
Factors Affecting Disclosure of Personal Health Information via Mobile Application <i>Kanokwan Atchariyachanvanich, Nichaporn Mitinunwong, Butsaraporn Tamthong</i>	203
Applied Informatics	209
Impact Analysis of Emotion in Figurative Language <i>Pyae Phyto Thu, Nwe New</i>	209
Performance Evaluation of Recoverable End-of-life Products in the Reverse Supply Chain <i>Santoso Wibowo, Srimannarayana Grandhi</i>	215
Software Architectures, Design Patterns, Frameworks	221
Simulation Tools for Cloud Computing: A Survey and Comparative Study <i>Fairouz Fakhfakh, Hatem Hadj Kacem, Ahmed Hadj Kacem</i>	221

Design and Timed Verification of Self-adaptive Systems <i>Marwa Hachicha, Riadh Ben Halima, Ahmed Hadj Kacem</i>	227
Development of a Parser for the AADL Error Model Annex <i>Wafa Gabsi, Bechir Zalila, Mohamed Jmaiel</i>	233
Software Metrics & Project Management	239
An Approach Implementing Template-Based Process Development on BPMN <i>Xiaofeng Cui</i>	239
Analysis of Quality Evaluation Based on ISO/IEC SQuaRE Series Standards and Its Considerations <i>Yi Zhao, Jiayu Gong, Yun Hu, Zhenyu Liu, Lizhi Cai</i>	245
Web Engineering & Applications	251
A Query Suggestion Method Based on Random Walk and Topic Concepts <i>Jiawei Liu, Qingshan Li, Yishuai Lin, Yingjian Li</i>	251
A PageRank-Improved Ranking Algorithm Based on Cheating Similarity and Cheating Relevance <i>Ziqian Yuan, Wenhui Zhang, Huijuan Fu, Zhixiao Tu</i>	257
Managing Personal Health Records Using Meta-Data and Cloud Storage <i>Mohammed Abdulkareem Alyami, Majed Almotairi, Lawrence Aikins, Alberto R. Yataco, Yeong-Tae Song</i>	265
Aspect based Sentiment Analysis in Social Media with Classifier Ensembles <i>Isidoros Perikos, Ioannis Hatzilygeroudis</i>	273
High Performance and Small Computing	279
Applying Parallel Programming and High Performance Computing To Speed up Data Mining Processing <i>Ruijian Zhang</i>	279
Privacy-Preserving Online/Offline and Outsourced Multi-Authority Attribute-Based Encryption <i>Jiaye Shao, Yanqin Zhu, Qijin Ji</i>	285
Computer Architecture and VLSI	293
A High-speed Low Voltage CMOS Schmitt Trigger With Adjustable Hysteresis <i>Zhe Chen, Shuming Chen</i>	293
NoC Power Optimization using Combined Routing Algorithms <i>Ji Wu, Dezun Dong, Li Wang</i>	299
Control Systems, Intelligent Systems	305
EMACS: Design and Implementation of Indoor Environment Monitoring and Control System <i>Zhi-xiao Tu, Cheng-chen Hong, Hao Feng</i>	305
Design and Study of Leg Automatic Leveling Control System of Military Bridge <i>Hui Li, XiaoHua Shi, Biao Wang, XiaoQing Zhu</i>	311
Robust Tracking Control for a Class of Multivariable <i>Wakeel Khan, Yan Lin, Sarmad Ullah Khan</i>	317
Research and Implementation on Portable Metal-oxide Arresters Performance Detection <i>Wenling Yang, Guowei Chen, Menhong Wang, Jianxin Gong</i>	323
Remote Sensing of Damage Bridge Structure of Free Vibration by Using Finite Element Method Based on Subspace Fitting <i>Bouyahi Mohamed, Ezzedine Tahar</i>	329
Human Experience Knowledge Induction based Intelligent Train Driving <i>Jin Huang, Fan Yang, Zengkun Li, Xibin Zhao, Yangdong Deng, Ming Gu</i>	335

Knowledge Discovery, Neural Networks and Genetic Algorithms	341
Learning Pairwise SVM on Deep Features for Ear Recognition <i>Ibrahim Omara, Xiaohe Wu, Hongzhi Zhang, Yong Du, Wangmeng Zuo</i>	341
Investment Time Series Prediction Using a Hybrid Model Based on RBMs and Pattern Clustering <i>Fan Shen, Nianlong Luo</i>	347
A Pair-wise Bare Bones Particle Swarm Optimization Algorithm <i>Jia Guo, Yuji Sato</i>	353
Application of Improved Wavelet Neural Network in <i>Guoshuai Cai, Chunqing Li</i>	359
Cooperative Multi-Agent Reinforcement Learning in a Large Stationary Environment <i>Wiem Zemzem, Moncef Tagina</i>	365
A Novel Approach for Ontology-based Dimensionality Reduction for Web Text Document Classification <i>Mohamed K. Elhadad, Khaled M. Badran, Gouda I. Salama</i>	373
An Enhanced Water Cycle algorithm for Optimization of Multi-Reservoir Systems <i>YanJun Kong, Yadong Mei, Weinan Li, Xianxun Wang, Yue Ben</i>	379
Research on RBF Neural Network in Simulation of MBR Membrane Pollution Simulation <i>Xiangning Chen, Chunqing Li, Wenbo Hu, Jia Tang</i>	387
Lunar Craters Visualization based on Orthogonal Spline basis <i>Wei Chen, Lifang Chen</i>	391
A Flexible Finger-mounted Airbrush Model for Immersive Freehand Painting <i>Ruimin Lyu, Yuefeng Ze, Wei Chen, Fei Chen, Yuan Liu, Lifang Chen, Haojie Hao</i>	395
An Ensemble Classification Algorithm for Convolutional Neural Network based on AdaBoost <i>Shuo Yang, Li-Fang Chen, Tao Yan, Yun-Hao Zhao, Ye-Jia Fan</i>	401
Image Processing & Pattern Recognition	407
A Rapid Fuzzy Distance Transform Algorithm <i>Ping Zhou, Guochao Cai, Yiwei Cao, Siyuan He, Nirong Bao</i>	407
Three-dimensional Quantum Cellular Neural Network and Its Application to Image Processing <i>Sen Wang, Li Cai, Huanqing Cui, Chaowen Feng, Xiaokuo Yang</i>	411
An Ant Particle Filter for Visual Tracking <i>Fasheng Wang, Baowei Lin, Xucheng Li</i>	417
A Comparison between Steganography Software Tools <i>Hera Arif, Hassan Hajjdiab</i>	423
Internet Technology and Applications, e-Commerce	429
Effects of Personal Values and Perceived Values on E-book Adoption <i>Boonlert Watjatrakul, Chan Pin Hu</i>	429
Internet of Things	435
Reconfigurable Smart Water Quality Monitoring System in IoT Environment <i>Cho Zin Myint, Lenin Gopal, Yan Lin Aung</i>	435
Mobile/Wireless Computing	441
Combining Memory Allocation and Processor Volatage Scaling for Energy-Efficient IoT Task Scheduling <i>Sunhwa A. Nam, KyungWoon Cho, Hyokyung Bahn</i>	441
Big Data and Analytics	447
Smart City: The State of the Art, Datasets, and Evaluation Platforms <i>Sriharsha Mallapuram, Nnatubemugo Ngwum, Fang Yuan, Chao Lu, Wei Yu</i>	447

Adaptive Methods for Efficient Burst and Correlative Burst Detection <i>Phyu Phyu Khaing, Nwe Nwe</i>	453
Parallel and Distributed Computing & Systems	459
A Group Based Genetic Algorithm Data Replica Placement Strategy For Scientific Workflow <i>Lihui Liu, Ying Yang, Haibo Wang, Zhifei Tan, Chen Li</i>	459
A Parallel Hybrid Heuristic Based on Karp's Partitioning for PTSP on Multi-core Processors <i>Mohamed Abdellahi Amar, Walid Khaznaji, Monia Bellalouna</i>	465
The 8th International Workshop on Intelligent Computational Science (ICS 2017)	471
Research and Implementation of SVD in Machine Learning <i>Yongchang Wang, Ligu Zhu</i>	471
Feature Extension for Chinese Short Text Classification Based on Topical N-Grams <i>Baoshan Sun, Peng Zhao</i>	477
Design and Implementation of Recommendation System of Micro Video's Topic <i>Dongdong Jiang, Wenqian Shang</i>	483
The Online Education Platform using Proxmox and noVNC technology based on Laravel Framework <i>Lei Chen, Deqin Chen, Wei Huang, Aina Sui</i>	487
Natural Image Quality Assessment Based on Visual Cognitive Mechanism <i>Run Zhang, Yongbin Wang</i>	493
An Automatic Generation Method of Sports News Based on Knowledge Rules <i>Junpeng Gong, Wen Ren, Pengzhou Zhang</i>	499
An Digital Signature Method Applied for Distributed Rendering Submit System <i>Weihua Xie, Shuang Feng</i>	503
Online Sponsored Search Auction Matching Problem with Advertiser Credibility <i>Xiaohui Li, Yang Zhou, Hongbin Dong, Jun He</i>	509
Wetland Remote Sensing Classification Using Support Vector Machine Optimized with Co-Evolutionary Algorithm <i>Xiaodong Yu, Hongbin Dong</i>	517
Research on Endurance Evaluation for NAND Flash-based Solid State Drive <i>Xiaoshan Yang, Ligu Zhu, Qicong Zhang</i>	523
A Good Data Allocation Strategy on Non-Uniform Memory Access Architecture <i>Xiaomei Guo, Haiyun Han</i>	527
Audio Retrieval Based on Wavelet Transform <i>Deqin Chen, Wenhui Zhang, Zhibo Zhang, Wei Huang, Jia Ao</i>	531
CTMC-based Numerical Analysis of Cluster System with Middle States in the Case of Common Mode Failure <i>Zhiguo Hong, Minyong Shi, Yongbin Wang</i>	535
Double Hand-gesture Interaction for Walk-through in VR Environment <i>Fan Zhang, Shaowei Chu, Ruifang Pan, Naye Ji, Lian Xi</i>	539
Contained Fluid Simulation Based on Game Engine <i>Wenfeng Hu, Zhe Wang, Xin Fan</i>	545
Opportunities and Challenges of TV Media in the ig Data Era <i>Chunjie Zhang, Wenqian Shang, Weiguo Lin, Yongan Li, Rui Tan</i>	551
An Analysis of Consumers' Cognition and Reading Time Prediction in Digital Reading <i>Haiyan Li, Hui Zhang, FangHong Zhang, Meijing Guo</i>	555
Study on Regional Differences of Cultural Consumption about Urban Residents in China <i>Hui Zhang, BingQi Yan, JuanJuan Cai, XinYan Li, Qi Shen</i>	559
The Reply and Development Strategy of Cable TV industry in the era of big data <i>Junjie Huang, Wenqian Shang, Weiguo Lin, Yongan Li, Rui Tan</i>	563

3D Model Dynamic Cutting Technology Based on Game Engine <i>WenFeng Hu, Shuang Zhao, Yu Ren.</i>	569
A Machinima System Based on Network Game <i>Wenfeng Hu, Yi Xie</i>	577
Research Review on Key Techniques of Topic-based News Elements Extraction <i>Qing Song, Ying Zhang, Pengzhou Zhang</i>	585
Outcome Prediction of DOTA2 Based on Naïve Bayes Classifier <i>Kaixiang Wang, Wenqian Shang</i>	591
Game Special Effect Simulation Based on Particle System of Unity3D <i>Bingqing Zhang, Wenfeng Hu</i>	595
Pan-and-Tilt Self-Portrait System Using Gesture Interface <i>Shaowei Chu, Fan Zhang, Naye Ji, Zhefan Jin, Ruifang Pan</i>	599
Express Supervision System Based on NodeJS and MongoDB <i>Li Liang, Ligu Zhu, Wenqian Shang, Dongyu Feng, Zida Xiao</i>	607
The Prediction of Character Based on Recurrent Neural Network Language Model <i>Zejian Shi, Minyong Shi, Chunfang Li</i>	613
The Application Of Immune Clone Algorithm In Network Intrusion Detection <i>Xuekun Zhang, Jing An, Yongbin Wang, Wen Liu</i>	619
Research Of Web Front-end Engineering Solution In Public Cultural Service Project <i>Ning Zhang, Yizhen Cao, Shengyan Zhang</i>	623
Analysis about Serious Game Innovation on Mobile Devices <i>Yingzi Wang, Wenfeng Hu</i>	627
Application of Deep Learning in Object Detection <i>Xinyi Zhou, Wei Gong, WenLong Fu, Fengtong Du</i>	631
Naive Bayes Classifiers for Music Emotion Classification Based on Lyrics <i>Yunjing An, Shutao Sun, Shujuan Wang</i>	635
MapReduce System Productivity Measurement Model and Measuring Approach <i>Dongyu Feng, Wenqian Shang, Ligu Zhu, Lei Zhang</i>	639
The Research on Segmentation Methods of Soccer Videos <i>Chenjing Feng, Peng Yu, Shuiyuan Yu, Shengyan Zhang</i>	645
A Novel Retinex Based Enhancement Algorithm Considering Noise <i>Xinyan Yu, Xiaoyue Luo, Guohao Lyu, Siwei Luo</i>	649
The Optimization Research on Map Marker Coverage <i>Mengke Cheng, Ligu Zhu, Wenqian Shang</i>	655
Implementation of the Protein Sequence Model Based on Ant Colony Optimization Algorithm – <i>Aimoerfu, Minyong Shi, Chunfang Li, Dong Wang, – Hairihan</i>	661
Design and Implementation of High Efficiency Acquisition Mechanism for Broadcast Audio Material <i>Jian DingI, Yongbin Wang, Shujuan Wang, Qi Wang</i>	667
Research and Implementation of a New Intelligent Dimming System for Modern Theatre <i>Hui Rena, Zhang Liu, Shuwei Li</i>	671
Analysis of Film Data Based on Neo4j <i>Huiling Lu, Zhiguo Hong, Minyong Shi</i>	675
Radio and Television Operators Cloud Computing nrastructure Research System <i>Chunjie Zhang, Wenqian Shang, Weiguo Lin, Yongan Li, Rui Tan</i>	679
Finding Vulnerable Curves Over Finite Fields of Characteristic 2 by Pairing Reduction <i>Yuhong Zhang, Meng Zhang, Maozhi Xu</i>	683

Architecture Design Of Online Education System <i>Sike Ren, Weiguo Lin</i>	689
3D Architecture Facade Optimization Based on Genetic Algorithm and Neural Network <i>Yan Zhang, Guangzheng Fei, Wenqian Shang</i>	693
Analysis on Radio and Television Development <i>Yinan Yuwen, Jianxiang Cao, Weiguo Lin, Yongan Li, Rui Tan</i>	699
Process Research on College Student's Entrepreneurial Risk Awareness <i>Qinghan Kong, Guojia Su</i>	703
Analysis and Studies on the Influence of Housing Estate Openness on Road Capacity <i>Yuping LI, Jinnuo Zhang, Guojia Su</i>	707
Research on the Present Situation and Problems of Listed Companies in Henan <i>Dan Zheng, Sujia Guo</i>	713
Probability Property of Minimal Process <i>Xianhong Xu, Cheng Tian, Qinghan Kong</i>	717
Online News Recommender Based on Stacked Auto-Encoder <i>Sanxing Cao, Nan Yang, Zhengzheng Liu</i>	721
Special Session 1: Machine Learning and its application	727
K-means based on Active Learning for Support Vector Machine <i>Jie Gan, Ang Li, Qian-Lin Lei, Hao Ren, Yun Yang</i>	727
Semi-Supervised Distance Metric Learning for Person Re-Identification <i>Feng Chen, Jinhong Chai, Dinghu Ren, Xiaofang Liu, Yun Yang</i>	733
Fuzzy Ontology Induction in the Cognitive Model of Ontology Learning <i>Dehai Zhang, Naiyao Wang, Ye Yuan, Bin Wang, Yun Yang</i>	739
Special Session 2: Intelligent Computing and Systems	747
Research on Big Data Management and Analysis Method of Multi-Platform Avionic <i>Miao Wang, Zheng Dai, Hangyu Guo, Tao Yang</i>	747
QoS-CITS: A Simulator for Service-oriented Cooperative ITS of Intelligent Vehicles <i>Kailong Zhang, Min Wang, Hang Su, Ansheng Yang, Arnaud de La Fortelle, Kejian Miao</i>	751
Multi-platform fire control strike track planning method based on deep enhance learning <i>Lihua Zhang, Miao Wang, Hangyu Guo, Tao Yang</i>	757
Real-time Image Detail Enhancement Implementing on Multi-core DSP Platform <i>Guodong Wang, Yue Cheng, Lei Zhang, Zhengjun Zhai</i>	763
A Parallel Method for Aerial Image Stitching Using ORB Feature Points <i>Guodong Wang, Zhengjun Zhai, Bangdao Xu, Yue Cheng</i>	769
A Parallel Image Processing Platform based on Multi-Core DSP <i>Guodong Wang, Xiaojian Liu</i>	775
Ground Proximity Warning Mission System Dynamic Safety Modeling Based on SoTeRiA <i>Miao Wang, Jie Chen, Shenghui Zhang</i>	781
Special Session 3: Control and Intelligent Systems in Industry and Manufacturing	785
Heuristic Simulated Annealing Approach for Diffusion Scheduling in a Semiconductor Fab <i>Yinzhì Zhou, Kan Wu</i>	785
Improvements to Genetic Algorithm for Flexible Job Shop Scheduling with Overlapping in Operations <i>Yiyong He, Wei Weng, Shigeru Fujimura</i>	791
An Improved Teaching-Learning-Based Optimization Algorithm to Solve Job Shop Scheduling Problems <i>Linna Li, Wei Weng, Shigeru Fujimura</i>	797

A Hybrid MTS-MTO Production Model with a Dynamic Decoupling Point for Flexible Flow Shops <i>Yanchao Jia, Wei Weng, Shigeru Fujimura</i>	803
Multiple Kernel Learning based Feature Selection for Process Monitoring <i>Sheng-Lan Yang, Wei Weng, Gang Rong, Yi-Ping Feng</i>	809
Special Session 4: Web Applications of Testing and Formal Verification	815
An Empirical Study on Clustering Approach Combining Fault Prediction for Test Case Prioritization <i>Lei Xiao, Huaikou Miao, Weiwei Zhuang, Shaojun Chen</i>	815
A Study for Extended Regular Expression-based Testing <i>Pan Liu, Jun Ai, Zhenning Xu</i>	821
Credit Evaluation of Gas Consumers by Combining Hierarchy Analysis with Clustering <i>Wenqing Xu, Huiqun Yu, Jianmei Guo, Jinglei Shen, Huaiying Sun</i>	827
Malware Detection on Android Smartphones using Keywords Vector and SVM <i>Junmei Sun, Kai Yan, Xuejiao Liu, Chunlei Yang, Yaoyin Fu</i>	833
Mini-XML: An Efficient Mapping Approach Between XML And Relational Database <i>Huchao Zhu, Huiqun Yu, Guisheng Fan, Huaiying Sun</i>	839
An Adaptive Scheduling Algorithm for Heterogeneous Hadoop Systems <i>Jiazhen Han, Zhengheng Yuan, Yiheng Han, Cheng Peng, Jing Liu, Guangli Li</i>	845
Safety Prediction of Rail Transit System Based on Deep Learning <i>Yan Zhang, Jiazhen Han, Jing Liu, Tingliang Zhou, Junfeng Sun, Juan Luo</i>	851
Path Reduction of Multiple Test Points in Dynamic Symbolic Execution <i>Jiawen Lu, Lizhi Cai, Yang Zhang</i>	857
On Member Search Engine Selection Using Artificial Neural Network in Meta Search Engine <i>Denghong Liu, Xian Xu, Yu Long</i>	865
Hierarchy Attribute-Based Encryption Scheme to Support Direct Revocation in Cloud Storage <i>Shuci Jiang, Weibin Guo, Guisheng Fan</i>	869
Special Session 5: Theory and Application for Sophisticated and Advanced Software	875
FDR Verification of a System Involving a Robot Climbing Stairs <i>Tomoo Sumida, Hiroyuki Suzuki, Sho Sei Shun, Kazuhito Omaki, Takaaki Goto, Kensei Tsuchida</i>	875
Ridge Line Detection of Terrain Maps Represented by Homogeneous Triangular Dissections <i>Shinji Koka, Koichi Anada, Takaaki Goto, Hitomi Noto, Takeo Yaku</i>	879
Special Session 6: Internet-of-Things Theory and Applications	885
A Communication Method between IPv4 server and IPv6 Network in Virtual Machine Environment <i>Feng Sha, Xuhui Chen, Ruizhe Ye, Menghong Wu, Zilong Zhang, Wentian Cai</i>	885
Stepper Motor SPWM Subdivision Control Circuit Design Based on FPGA <i>Hong-bin Wang, Zhe Zhang, Xu-hui Chen, Yuan-bin Wang</i>	889
STM32-based Vehicle Data Acquisition System for Internet-of-Vehicles <i>Yong Xie, Xin Su, Yifan He, Xuhui Chen, Gengliang Cai, Baisheng Xu, Wenjia Ye</i>	895
Cloud-Assisted Home Health Monitoring System <i>Jianqiang Hu, Xuhui Chen, Yuan Wang, Yicheng Huang, Xin Su</i>	899
Holistic Instructional Design Model and Course Examination for the Four-Component Instructional Design System <i>Xuhui Chen, Huiyan Cheng, Shaochun Xu, Boyu Wen</i>	905
Author Index	911