

2017 6th International Conference on Computer Science and Network Technology (ICCSNT 2017)

**Dalian, China
21 – 22 October 2017**



**IEEE Catalog Number: CFP1709R-POD
ISBN: 978-1-5386-0494-6**

**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:	CFP1709R-POD
ISBN (Print-On-Demand):	978-1-5386-0494-6
ISBN (Online):	978-1-5386-0493-9

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

Topic Title: 1.1 Computer Applications		
PID	Paper Information	First Page
3195	DNA Motif Prediction of Shrub Willow (<i>suchowensis</i>) through Comparative Genetic Approach <i>Yiqing Xu, Changwei Bi, Guoxin Wu, Fuquan Zhang, Suyun Wei, Anna Jiang, Ning Ye</i> 1. Southeast University 2. Nanjing Forestry University	1
3204	Quartic Generalized Ball Surfaces with Shape Parameters and Its Continuity Conditions <i>Gang Hu, Ling Luo, Ru Li, Chen Yang</i> Xi'an University of Technology	5
3206	Cross-lingual Similar Documents Retrieval Based on Co-occurrence Projection <i>Jiao LIU, Rong-Yi CUI, Ya-Hui ZHAO</i> Yanbian University	11
3207	The Research of Efficient Publishing of Subscription System <i>Yan Xiao, Zongmin Cui, Jing Yu, Guangyong Gao, Caixue Zhou</i> Jiujiang University	16
3212	The Improved Simulated Annealing Genetic Algorithm for Flexible Job-Shop Scheduling Problem <i>Xiaolin Gu, Ming Huang, Xu Liang</i> Dalian Jiao tong University	22
3213	An Improved Quantum Particle Swarm Optimization and Its Application <i>Xuan Jiao, Ming Huang</i> Dalian Neusoft University of Information	28
3214	An Improved Attribute Recognition Algorithm of Overhead Line Engineering Evaluation Based on Confidence Dispersion <i>Wenhe Shi, Xiangjun Liu, Mailin Li</i> North China Electric Power University	32
3225	Research on the Course Discrimination Based on Multi- Classification Method and Feature Selection <i>Yuefeng Zheng, Huishi Du, Guijie Zhang, Jing Gan</i> BoDa College of Jilin Normal University	37
3227	An Agile Framework Adaptive to Complicated Memory Workloads for VM Migration <i>Simin Yu, Yuqing Lan, Chaoying Wu, Tao Han</i> Beihang University	42
3232	Research on the Competition Game Between Net About Car and Traditional Taxi under Internet Pus Background <i>Lin Fan, Leilei She</i> Northwestern Polytechnical University	47
3237	Design and Implementation of Building Information Collection System for Earthquake Disaster Scenario Construction Based on GIS <i>Qing-Quan Tan, Qun Liu, Hua-Chun Luo, Bo Liu, Jian Liu</i> Beijing Earthquake Agency	51
3246	Framework and Practice of Integrated Coastal Zone Management Based on 3D Earth Model <i>Jian Liu, Xiangtao Fan, Zhuxin Xue, QingQuan Tan</i> Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences	55

3250	Optimal Design and Applied Research of a Trailing Suction Hopper Dredger Loading System <i>Wei Li, Zhen Su, Guojun Hong</i> CCCC National Engineering Research Center of Dredging Technology and Equipment	59
3257	A Study of Algorithms for Traveling Segment Sequences Based on Convex Chain <i>Lijuan Wang, Hongfeng Hou, Changan Xu, Bo Jiang, Tao Ning</i> School of Information and Science, Dalian Institute of Science and Technology	63
3268	On-Line Strategies for Evacuating from an Unknown Grid network Area in the Plane by groups <i>Pengfei Yao, Bo Jiang, Yiyang Jia</i> Dalian Maritime University	69
3269	An Efficient Algorithm for Touring a Sequence of given Convex Polygons in the Plane <i>Changan Xu, Bo Jiang, Lijuan Wang</i> Dalian Maritime University	74
3270	Optimizing Effective Fusion Representation by Particle Swarm Optimization Algorithm for Protein Sub-nuclear Location <i>Yaoting Yue, Shunfang Wang</i> Yunnan University	79
3275	IoT Device Management Architecture Based on Proxy <i>Wenquan Jin, Do-Hyeun Kim</i> Jeju National University	84
3283	The Primitive-Oriented Spatial Partition Based on BVH <i>Wei Yan, Jianbin Zhao, Feixue Tang, Shiming Yuan</i> Peking University	88
3284	The Cooperation Stability Evaluation between Chinese and overseas Chinese and going-out enterprises Based on Fuzzy Synthetic Evaluation Model <i>Yuxin Liang, Qun Wang, Hui Li</i> Hohai University	92
3289	Research on Cross-platform Unified Resource Access Control Management System <i>Xiaogang Wang, Zhenhua Yin</i> Changzhou College of Information Technology	96
3291	Protein Subnuclear Location Based on KLDA with Fused Kernel and Effective Fusion Representation <i>Yaoting Yue, Shunfang Wang</i> Yunnan University	102
3294	A Fast Algorithm for Touring the Disjoint Convex Polygons in the Given Order <i>Lijuan Wang, Dandan He, Hongfeng Hou, Bo Jiang, Tao Ning</i> Dalian Institute of Science and Technology	107
3295	Design and Research of Wind Farm Monitoring and Information Management System Based Web and Distribute Process Technology <i>Lihua Sun, Xiaodong Bian, Zhen Kong, Chun Deng, Mu Hu, Liming Luo, QingQiang Meng</i> NARI	112
3298	An Efficient Multi-Pattern Matching Applied to Delimit PPTX Document Data Stream <i>Simiao Ding, Xiaomei Wang, Dongyu Yang, Yao Zheng</i> Information Engineering University	118
3301	A New Local Optimization Method of Finite- Element Mesh <i>Lei Jiang, Wei Chen</i> Chengdu Textile College	123
3313	DMS: a Dynamic Multi-tiered Storage with Deduplication Based on Variable-Sized Chunks <i>Xiao Liu, Bin Zhou</i> South-Central University for Nationalities	127

3317	Research on Persistent Memory File System Optimization <i>Jianquan Zhang, Dan Feng, Jingning Liu, Lei Yan, Zheng Zhang</i> Huazhong University of Science and Technology	132
3321	Using Kernel SVM for Predicting Membrane Protein Types by Fusing PseAAC and DipC <i>Zicheng Cao, Shunfang Wang, Lei Guo</i> Yunnan University	143
3337	Research on the Design of International Student Management System <i>Wenyu Zhang</i> North China University of Technology	148
3340	Study on Software Part of Ultrasonic Ranging System Based on Variable Emission Wavelength <i>Hongli TAI, Huan ZHANG, Song YANG</i> Sichuan Staff University of science and technology	153
Topic Title: 1.2 Software Engineering		
PID	Paper Information	First Page
3230	Design and Implementation of Knowledge Service System of Tujia Brocade Culture Based on IOS <i>Gang Zhao, Zhuoran Luo, Dasheng Zhao, Shuai Lu, Peng YU, Hui Zan</i> Central China Normal University	157
3245	The Generation of Software Reliability Test Cases Based on Software Reuse <i>Jie Wang, Pei Tian, Wen-qing Shi, Yan Xiao</i> Communication University of China	161
3247	A Task Scheduling Simulation for Phased Array Radar with Time Windows <i>Weiqiang Song, Xing Han, Jian Gao</i> Xi'an Electronic Engineering Research Institute	165
3248	Research on the Overall Design Scheme of Consistency test System <i>Songsong Chen, Dezhi Li, Mingyu Dong, Bin Yang, Changli Liu, Yi Sun, Bin Li</i> China Electric Power Research Institute	170
3276	Application Research of Energy Data Acquisition and Analysis based on Real-time Stream Processing Platform <i>Kunming Li, Cong Ji, Chunlin Zhong, Fei Zheng, Jun Shao</i> Jiangsu Frontier Electric Technology CO.,LTD	175
3315	Research and Design of APP for New Energy Vehicles Electronic Control System Based on Cloud Platform <i>Chengqiang Lu, Jie Zeng, Yizhe Zeng, Tiantian Shi, Yuhua Zhang, Yongwei Guo</i> Dalian Jiaotong University	179
3331	Efficient Incremental Checkpoint based on Hybrid Page <i>Ruibo Wang, Wenzhe Zhang</i> National University of Defense Technology	184
Topic Title: 1.3 Data Mining & Data Engineering		
PID	Paper Information	First Page
3205	Analysis of TV Audience Flow Based on the Lingered Channel Matrix <i>Fulian Yin, Xuesong Bai, Jianping Chai, Wenwen Zhang</i> Communication University of China	189
3223	Hidden Information Recognition Based on Multitask Convolution Neural Network <i>Jiawen Liu, Huimei Yuan, Mingyang Li</i> Information and Engineering College Capital Normal University	194
3224	An Improved Partition Algorithm to Find Large Itemsets in K-dimensional Space <i>Bin Zeng, Lu Yao</i> University of Naval Engineering	199

3242	Data Acquisition and Researches based on Radar Echo Navigation Information Technology <i>Hanguang Zhang, Jin Bi, Jietao Li, Ke Ma</i> Xi'an Electronic Engineering Research Institute	204
3259	Research on Warehouse Management System Based on Association Rules <i>Zhimin Chen, Wei Song, Lizhen Liu, Chao Du</i> Capital Normal University	208
3265	Research on the Recommendation of Mobile Phone tariff Package Based on Time Series Analysis <i>Xiaodan Gao, Zhiying Cao, Xiuguo Zhang</i> Dalian Maritime University	213
3267	Research on Tariff Recovery Risks Assessment Method Based on Electrical User Portrait Technology <i>Tao Wang, Jianjun Hu, Chunfang Li, Zhixian Zhang</i> State Grid Yinchuan Power Supply Company	218
3277	Research on Technology and Application of Tag Portrait Based on Electric Power Big Data <i>Chunlin Zhong, Hui Lv, Cong Ji, Mingzhu Xu, Chao Fang, Kunming Li</i> Jiangsu Frontier Electric Technology CO.,LTD	222
3302	TGCEL: A Chinese Entity Linking Method Based on Topic Relation Graph <i>Yi Chen, Yusong Tan, Qingbo Wu, Wei Wang</i> National University of Defense Technology	226
3303	Application of Modified Partial Least Squares in Data Analysis of Traditional Chinese Medicine <i>Wangping Xiong, Jianqiang Du, Bin Nie, Liping Huang, Xian Zhou</i> Jiang Xi University of Traditional Chinese Medicine	231
3318	An Overlapping Community Detection Algorithm Based on Lévy Flight <i>Qijuan Sun, Guoliang Deng, Hao Chun, Qing Nian, Longjie Li, Zhixin Ma</i> Lanzhou University	236
3319	Hasse Diagram based Algorithm for Continuous Temporal Subgraph Query in Graph Stream <i>Xiaoli Sun, Yusong Tan, Qingbo Wu, Jing Wang</i> National University of Defense Technology	241
3320	Eigenvector Label Propagation Algorithm for Interactive Learning In Student Groups Based on Student Social Network <i>Zhiping Wang</i> Shanghai Jiao Tong University	247
3326	Research on Query Analysis and Optimization Based on Spark <i>Yan Li, Hongbo Wang, Yangyang Li</i> Beijing University of Posts and Telecommunications	251
3332	Recommendation Based on Trust and Distrust Social Relationships <i>Zhen-qian Fei, Wei Sun, Xiao-xin Sun, Guo-zhong Feng, Bang-zuo Zhang</i> Northeast Normal University,	256
3336	Big Data Analysis for SCIE Research Output of Chinese Computer Science <i>Li Yang, Jing Zhou, Jun Shi, Yueyang Li</i> Anhui University	261
3339	Extracting Product Features From Online Chinese Reviews <i>Jie Chen, Youqun Shi, Xin Luo, Ran Tao, Yifan Gu</i> Donghua University	266
Topic Title: 1.4 Intelligent Systems		
PID	Paper Information	First Page

3061	Research on Hybrid Cloud Particle Swarm Optimization for Multi-objective Flexible Job Shop Scheduling Problem <i>Xu Liang, Jiawei Duan, Ming Huang</i> Software Institute Dalian Jiaotong University	274
3194	Organizing Tactics Based Optimization Theory <i>A.S XIE, D.X LIU</i> Zhejiang University of Technology	279
3210	The Application of Hybrid Particle Swarm Optimization in Job Shop Scheduling Problem <i>Ming Huang, Wenju Yang, Xu Liang</i> Dalian Jiaotong University	285
3249	Face Detection Based on Multi Task Learning and Multi Layer Feature Fusion <i>Yanan Zhang, Hongyu Wang, Fang Xu</i> Shenyang Institute of Automation Chinese Academy of Sciences	289
3263	An Intelligent Fault Diagnosis Approach Integrating Cloud Model And CBR <i>Junjie Gao, Wei Xiao, Yanan Xie, Feng Gu, Baozhen Yao</i> Dalian University of Technology	294
3264	Fast Detection of Moving Object Based on Improved Frame-Difference Method <i>Mingzhu Zhu, Hongbo Wang</i> Beijing University of Posts and Telecommunications	299
3279	Research on Fault Warning of AC Filter in Converter Station Based on RBF Neural Network <i>Lei Shi, Shenxi Zhang, Junhong Li, Peng Wei, Zhiyuan Liu, Zhixian Zhang</i> State Grid Ningxia Power Corporation Maintenance Company	304
3305	A Chinese Short Text Semantic Similarity Computation Model Based on Stop Words and TongyiciCilin <i>Shancheng Tang, Yunyue Bai, Fuyu Ma</i> Xi'an University of Science and Technology	310
3329	An Object Detection System Based on YOLO in Traffic Scene <i>Jing Tao, Hongbo Wang, Xinyu Zhang, Xiaoyu Li, Huawei Yang</i> Beijing University of Posts and Telecommunications	315
Topic Title: 2.2 Communications & Networking		
PID	Paper Information	First Page
3199	A 12 Bits Chipless RFID Tag Based on 'I-shaped' Slot Resonators <i>Keyi Xie, Yanbing Xue</i> Dalian Jiaotong University	320
3201	Networking Research of Observation Instruments Based on IPv6 Technology <i>Jiuyuan Huo, Zhinan Ren, Yongru Yang, Milin Ren</i> Lanzhou Jiaotong University	325
3215	Research on Clustering Routing Algorithm based on K-means++ for WSN <i>Xiang Yang, Yu Yan, Dengteng Deng</i> Guilin University of Technology Bowen College of Management	330
3229	Frequency Offset Estimation Algorithm of Spread Spectrum Coherent Heterodyne Based on ISFT <i>Cancan Sun, Ronghua Zhou, Hangcheng Han, Xiangyuan Bu</i> Beijing Institute of Technology	334
3234	Research on the Application and Development Trend of Cloud Computing Based on E-Commerce <i>Lei Shi, Wenyong Wang, Wang Jinghui, Yi Su</i> Teaching and research section of Information management, Information and Technology College, Jilin Agricultural University Changchun, China	339

3236	CLEAN: an Approach for Detecting Benign Domain Names based on Passive DNS Traffic <i>Chunyu Han, Yongzheng Zhang</i> Nankai University, University of Chinese Academy of Sciences, Chinese Academy of Sciences	343
3238	Global Consensus Making on Multiplex Scale-Free Networks <i>Vu Xuan Nguyen, Gaoxi Xiao</i> Nanyang Technological University, Singapore	347
3239	Structural Healthcare Services For Multi-users Based on Spectrum Sharing Strategy <i>Yi Zhang, Shan Zhu, Hong-xin Liu, Cheng Chen, Zhu-juan Wang</i> WuHan Textile University	352
3240	Iterative Sparse Channel Estimator Based on SpaRSA Approach <i>Xiaolin Shi, Honglei Wang, Shu-Hung Leung</i> Xi' an University of Posts and Telecommunications	356
3243	Research of Security Risk in Electric Power Information Network <i>Feng Li, Jia Chen, Fei Shu, Jianye Zhang, Song Qing, Wenbin Guo,</i> State Grid Xinjiang Electric Power Research Institute	361
3253	Estimating the Number of Multiple Jamming Attackers in Vehicular Ad Hoc Network <i>Liang Pang, Pengze Guo, Xiao Chen, Jiabin Li, Zhi Xue</i> Shanghai Jiaotong University	366
3258	A Multi-Service Adaptive Wireless Communication Protocol for Industrial Networks <i>Shan Zhu, Shi Xiao</i> Wuhan Textile University	371
3260	Fast Load Group Resources Regulation Based on Logical Channel Mechanism <i>Jinsong Xue, Dongsheng Jing, Fang Wang, Peng Xu, Yi Sun, Bin Li</i> State Grid Su Zhou Power Supply Company	375
3262	Research on the Construction of Demand Response Standard System and Evaluation Method of Applicability <i>Mingyu Dong, Shiming Tian, Xueming Qiao, Yanhong Liu, Yiliang Wang, Sifang Liu, Bing Qi, Bin Li</i> China Electric Power Research Institute	380
3273	CODDULM: an Approach for Detecting C&C Domains of DGA on Passive DNS Traffic <i>Chunyu Han, Yongzheng Zhang</i> Nankai University, University of Chinese Academy of Sciences, Chinese Academy of Sciences	385
3280	A Fault Detection Design for Clustered Space Information Network Based on FTA <i>Yuanyuan Sun, Yongming Wang, Lili Guo, Zhongsong Ma, Huiping Wang</i> School of Cyber Security, University of Chinese Academy of Sciences,	389
3282	Secure Performance Analysis of A Satellite-Terrestrial Network With Multi-Eavesdroppers <i>Kefeng Guo, Bangning Zhang, Daoxing Guo</i> PLA University of Science and Technology	395
3288	OSO: Mitigating Data Flooding Attack in Wi-Fi Offloading <i>Zhicheng Liu, Junxing Zhang</i> Inner Mongolia University	400
3292	A Long Track on Backbone Nodes of Content Sharing Networks <i>Qiang Lu, Bo Liu, Huaping Hu</i> National University of Defense Technology	405
3297	An Optimized AODV Protocol Based on Clustering for WSNs <i>Yan Feng, Baihai Zhang, Senchun Chai, Lingguo Cui, Qiao Li</i> Beijing Institute of Technology	410

3324	Multi-domain Routing Technology based on PCE for Intelligent Optical Networks <i>Hongsheng Zhou, Li Lin, Xiaoqian Song, Li Du</i> Northeastern University	415
3327	User in the Loop: QoE-Oriented Optimization in Communication and Networks <i>Zhiyong Du, Dong Liu, Lijie Yin</i> National University of Defense Technology	420
Topic Title: 2.3 Multimedia & Signal Processing		
PID	Paper Information	First Page
3200	Vehicle Type Recognition Based on Adaptive Scaling Window and Masks <i>Wenying Mo, Ying Gao</i> Guangzhou University	425
3220	Adaptively Group Based on the First Joint Sparsity Models Distributed Compressive Sensing of Hyperspectral Image <i>Linuan Deng, Yuefeng Zheng, Ping Jia, Sichen Lu, Jiuting Yang</i> College of Bardon Jilin Normal University	429
3221	An Image Restoration Method Based on Cross- Correlation <i>Yao Hu, Yunfei Xu</i> Zhejiang University	435
3228	Fully Automated Segmentation of Coronary Lumen based on the Directional Minimal Path and Image Fusion <i>Liu Liu, Yu Yao, Ning Sun, Guang Han</i> Nanjing University of Posts and Telecommunication	439
3235	Vehicle Sticker Recognition Based on Multi-feature Encoding and Feature Matrix Distance <i>Zuchun Ding, Wenying Mo</i> Guangzhou University	443
3241	A Signal Processing Practice Method Based on LFM CW Radar <i>Ke Ma, Kaisheng Zhang, Yuanan Zhang</i> Xi'an Electronic Engineering Research Institute	449
3271	Double-level Binary Tree Bayesian Compressed Sensing for Block Sparse Image <i>Yongqing Qian, Weizhen Chen</i> Wuhan Polytechnic University	453
3281	A Modified Real Time Dynamic Spectrum Adjustment Scheme in FM IBOC Broadcasting <i>Fangfei Hu, Chaoshi Cai, Feng Hu, Yanqiong Zhuang</i> Communication University of China	458
3286	The Algorithm of Objective Questions Marking System based on Projection Method <i>Daofang Zhang</i> Guizhou University for Nationalities	463
3293	Image Enhancement Method Based on Wavelet and Adaptive Fractional Differential <i>Yizheng Wang, Li Liu</i> Lanzhou University	467
3300	Performance Assessment of GNSS Measurements from Android Platform <i>Jiyuan Liu, Yifan Hu, Dongsong Zhang, Huafu Liu</i> National University of Defense Technology	472
3308	LFM and FRFT to A Novel FSK Method <i>Shuai Qi, Daoxing Guo, Bangning Zhang, Kefeng Guo</i> PLAAEU	477
3328	Palmprint Recognition Based on CNN and Local Coding Features <i>Aoqi Yang, Jianxin Zhang, Qiule Sun, Qiang Zhang</i> Key Lab of Advanced Design and Intelligent Computing, Ministry of Education, Dalian University	482

3330	Discovering Latent Spatial Structured Patterns Using Graph Models for Scene Classification <i>Yuhua Fan</i> Liaocheng University	488
3334	An Efficient Implementation of FFT based on CGRA <i>Jinhe Wei, Jinjiang Yang, Hui Li, Youyu Wu</i> Zhongkexin Integrated Circuit Co., Ltd	493
3341	Sparse Adaptive L2LP Algorithms with Mixture Norm Constraint for Multi-Path Channel Estimation <i>Yanyan Wang, Yingsong Li, Rui Yang</i> Harbin Engineering University	498
Topic Title: 2.4 Computer Control, Robotics, & Automation		
PID	Paper Information	First Page
3067	The Online System of Measuring Film Thickness <i>Ping He, HongLi Chang, Han Gao, ZiYi Wang</i> Harbin Institute of Technology	503
3068	Design of IIR Digital Filter <i>Ping He, HongLi Chang, Han Gao, ZiYi Wang</i> Harbin Institute of Technology	506
3198	Research on Cattle Farm Management Information System <i>Ping He, HongLi Chang, Han Gao, ZiYi Wang</i> Harbin Institute of Technology	508
3251	Generalized Predictive Control and Delay Compensation for High-Speed EMU Network Control System <i>Tong Zhang, Chang-Xian Li, Zong-Liang Li</i> Dalian Jiao tong University	511
3290	Research on Load Fast Control Technology in Large-scale Supply-demand Friendly Interaction System <i>Wei Yu, Shubo Liu, Zheng Xiong, Yu Song, Daoqiang Xu</i> Jiangsu Frontier Electric Technology CO., LTD	516
3304	Research on DICOM File Compression and Offline Storage Platform <i>Wangping Xiong, Jianqiang Du, Bin Nie, Liping Huang, Xian Zhou</i> Jiang Xi University of Traditional Chinese Medicine	520
3333	Fuzzy Self-tuning Control of PID Parameters in SPMIG for Aluminum Alloy Sheet <i>Tianfa Liao, Jiexiang Xue</i> South China University of Technology	525
3217	The Features of Embedded Software Companies in Dalian <i>Kobayashi Mizuki</i> Ritsumeikan University	N/A
3102	Analysis of Bridge Deformations using Real-time BDS Measurements <i>Ruijie Xi*, Qusen Chen, Weiping Jiang, Ruijie Xi, Xiaolin Meng</i> Wuhan University, The University of Nottingham	532