2019 IEEE 9th International Conference on Electronics Information and Emergency Communication **(ICEIEC 2019)**

Beijing, China 12 – 14 July 2019



IEEE Catalog Number: CFP1988U-POD **ISBN:**

978-1-7281-1191-9

Copyright © 2019 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:	CFP1988U-POD
ISBN (Print-On-Demand):	978-1-7281-1191-9
ISBN (Online):	978-1-7281-1190-2
ISSN:	2377-8431

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



Table of Contents

Session 1

001-Z036	A Way to Quickly Converge to The Destination for Multi-Address Packet in Information-Centric Networking <i>Pufang Ma, Jinlin Wang, Jiali You</i>	1
002-Z011	Enable Device-Aware Flow Control with Enhanced Protocol-Oblivious Forwarding (POF) Zhengyi Jia, Jinlin Wang, Xiao Chen, Liyi Kang	5
003-Z023	Efficient Approach for optimization in Traffic Engineering for Multiprotocol Label Switching Muhammad A. Panhwar, Kamran A.Memon, Sijjad A. Khuhro,Adeel Abro, Deng Zhongliang,Zulfiqar Ali	9
004-Z024	Signboard Detection and Text Recognition Using Artificial Neural Networks Muhammad A.Panhwar, Sijjad A.Khuhro, Kamran A.Memon, Adeel Abro, Deng Zhongliang,Saleemullah Memon	16
005-Z021	Similarity Test for Privacy-Preserving Medical Data Sharing Based on NTRU Encryption Shaofen Xie, Faguo Wu, Xiao Zhang, Wang Yao, Zhiming Zheng	20
006-Z007	Measurement Uncertainty Analysis for Beidou RDSS Radiated Performance Test Zhang Qinjuan, Chen Xiaochen, Xiao Li, Zhang Xiao, Dai Xun	24
007-M070	Novel Genetic Algorithm with Efficient Routing Paradigm for Multi-hop WSNs Adeel Abro, Deng Zhongliang, Kamran Ali Memon, Noor ul Ain	28
008-Z070	Time Delay Estimation Based on Double Dynamic Threshold in Indoor Multipath Environment Long Zhang ,Chen Song ,Wang Sheng	32
009-Z113	Ionospheric Dispersion Dynamic Simulation Method of Satellite-ground Radio Links <i>Xin Cao, Cuiqing Kong, Zhe Zheng</i>	36
010-M085	A Watermark Algorithm Based on Space-domain and Transform-domain <i>Yu Zhang, Guangmin Sun</i>	41
Session 2		
011-Z031	Real-time Traffic Congestion Detection with SIGHTA Regression Network Long Jiang, Yatao Wang, Ying Zhao	45
012-Z143	An Evaluation Method of Running Status for Power Grid Dispatching Control System Based on Decision Graph and Pairwise Constraints Junliang Li, Jianhang Xu, Jie Yang, Qingxuan Jia, Xin Gao, Fei Ye	51
013-Z150	Active Phased Array Radar-based 2D Beamspace MUSIC Channel Estimation for an Integrated Radar and Communication System <i>Yadong Zhao, Yu Zhang, Jian Song</i>	56
014-Z158	Evaluating Deep Learning Based Network Intrusion Detection System in Adversarial Environment Ye Peng, Jinshu Su, Xiangquan Shi, Baokang Zhao	61

015-Z084	Study on Business Model of Internet of Vehicles Platform Considering Green Power Certificate Transaction Zhang Yuanxing, Jiang Bing, Diao Xiaohong, Li Taoyong, Zhang Jing, Liu Yongxiang, Xu Qingqiang	67
016-Z074	Human Ear Recognition Using HOG with PCA Dimension Reduction and LBP Yuchen Wu, Zhi Chen, Dounan Sun, Lichang Zhao, Chuan Zhou, Wenjing Yue	72
017-Z081	Central Frequency Offset Estimation Based on Multicarrier VDES System Jining Xie, Shujuan Hou, Qin Zhang	76
018-Z079	The Interference Analysis of Satellite Services in the 8025-8400 MHz Frequency Band <i>Huipeng Shi, Rui Han, Haiyang Liu, Chang Liu, Jie Liu</i>	81
019-M001	A Virtual Smart Home Based on EEG Control Weili Zhao, Xichun Zhang, Jun Qu, Jing Xiao, Yong Huang	85
020-M018	Design and Implementation of Mobile Application Performance Test Scheme Based on LoadRunner <i>Xiaojuan Guan, Yuanyuan Ma, Zhipeng Shao, Wantian Cao</i>	90
Session 3		
021-Z109	Genetic Expression Programming Based Dynamic Virtual Machine Consolidation in Cloud Computing Lei Qiao, Bo Liu, Yang Hua, Qing Zhao, Xiong Fu	94
022-M050	Transformer On-line Monitoring and Fault Diagnosis System Based on DRNN and PAS Huida Duan, Huan Xie, Yang Lu	98
023-M060	Research on Network Security Risk Assessment Method Based on Bayesian Reasoning Xiangna Li, Mengao Li, Hui Wang	102
024-M065	A New Construction Method of Heuristic Multi-Class Hierarchical Tree Structure Model Based on Support Vector Machine and Information Entropy <i>Dong Xiaorui, Yang Jianlei, Zhao Guangqiu, Rao Hong</i>	109
025-Z009	Task Scheduling Algorithm for Heterogeneous Realtime Systems Based on Deadline Constraints Jianpeng Li, Gewei Zheng, Hanbing Zhang, Guozhen Shi	113
026-Z010	Convolutional Neural Networks for Vehicle Re-identification with Adversarial Loss Linzhi Shang, Lizhen Liu, Wei Song, Xinlei Zhao, Chao Du	117
027-Z017	A Multi-path Reliable Data Transfer System Based on Multi-core Network Processors Zhibin Tang, Xuewen Zeng, Xiao Chen	122
028-Z027	Dynamic Quantum Proxy Blind Signature Scheme with Cluster State Minghui Zhang, Jiayao Wang, Linyang Yue	126
029-Z028	The Fault Diagnosis Model for Railway System Based on an Improved Feature Selection Method <i>Yuan Jie</i> , <i>Li Keping</i>	130
030-M102	Uplink Multi-panel Transmission Enhancements on Multi-beam Operation Yuxin Wang, Gang Qiu, Zhaohua Lu, Bo Gao, Hanqing Xu, Wenjun Yan	134
Session 4		
031-M033	Source Number Estimation Based on Improved Singular Value Decomposition at Low SNR	138

	Liuyang Gao,Mingzhong Liu,Jiaying Yue,Yinghua Tian	
032-Z048	Study on Frame Structure Detection in Physical Layer Based on Image <i>Kun Shao, Yingke Lei</i>	142
033-Z160	Text Detection Algorithm based on Improved YOLOv3 Huibai Wang, Zhenda Zhang	147
034-Z034	A Novel Double-Threshold Energy Detection Based on Correlativity Liu Zan, Chen Xihong, Xie Zedong	151
035-Z071	Direct Sequence Spread Spectrum UWB Channel Data Estimation Method Based on OBE Lai Tian, Jinfeng Liu, Ke Wang, Jiayang Shi	154
036-Z073	A Novel Sleep Staging Algorithm Based on Hybrid Neural Network Jingwei Hao, Senlin Luo, Limin Pan	158
037-Z091	Design and Implementation of High Speed Combined OSPI and HyperBus Flash Memory Host Controller <i>Xiaohu Wang, Hasan Qamrul</i>	162
038-Z099	Review of Gait Recognition Methods Ying Zhang, Lin Wang, Qinghong Wu, Chunshu Wu	166
039-Z104	Performance Study of AODV Protocol with Ant Colony Algorithm in VANETs <i>Yutong Li, Yutong Liu, Kai Shi</i>	170
040-Z107	Image Captioning with Emotional Information via Multiple Model Xing Liu, Weibin Liu, Weiwei Xing	174
Session 5		
041-Z010	WHAT: Wideband High-Accuracy Joint Tracking Technique for BDS B1 Composite Signal Weinan Zhang, Zheng Yao, Mingquan Lu	178
042-M080	Minimizing Energy Expenditures using Genetic Algorithm for Scalability and Longlivety of Multihop Sensor Networks <i>Adeel Abro, Deng Zhongliang, Kamran Ali Memon, Khalid H. Mohammadani, Imran Memon,</i> <i>Noor ul Ain, Saleemullah Memon, Muhammad A. Panhwar</i>	183
043-Z147	NB-IOT Drives Intelligent Cold Chain for Best Application Ning Zhang, Yingjie Liu	188
044-Z153	The Multi-scale Fast Network For Image Superresolution Yongsheng Duan, Yang Su, Wei Wu, Han Wang, Jiahao Xu	192
045-Z137	Network Representation Learning Method Based on Spatial-Temporal Graph in Dynamic Network <i>Xiaotao Cheng, Lixin Ji, Ying Yin, Ruiyang Huang</i>	196
046-Z126	Event-triggered Relative Position Coordinated Control for Spacecraft Formation with Limit Communication <i>Chuanjiang Li, Wenjia Wang, Peng Han, Yanning Guo</i>	201
047-Z115	Research on Role-based Access Control in IPv6 Smart Home Bo Cui, Zhikun Lan, Xiangyu Bai	205
048-Z105	Design of Multi-CPU Automatic Sorting System Based on Machine Vision Caihong Su, Hao Pang, Yuntong Liu, Jiezhao Ye	209

049-Z069	Secure Communications Method of WPT System Based on ECC and OFDM Technology Tonghui Yang, Zhihui Wang, Zhiping Zuo, Yu Liu, Lin Sang	213
050-Z078	An Anti-interference Design based on Glitch PUF	217
	Yongxing Dong, Jinfu Xu, Pengfei Guo	
Session 6		
051-Z026	Group Key Agreement for Mission-Critical Wireless Mesh Networks Cungang Yang, Celia Li	222
052-Z088	Research on Tracking Algorithm of Beidou B1C Signal <i>Wenjie Hao, Wenfei Gong</i>	226
053-Z094	Gabor Features Assist Semantic Feature Learning for Handwritten Formula Symbol Recognition Dingbang Fang, Gui Feng, Hengjie Yang	230
054-Z120	Survey on Context-aware Systems and Their Applications Liu Shuai, Sun Xiaodong, Yin Xiaohan, Tang Ruichun, Zhang Xueyan, Jiang Qingyun	234
055-Z124	Construction of Elevator Inspection Quality Evaluation System Based on Big Data <i>Xupeng Zhang, Du Liang</i>	238
056-Z128	Probability Distribution Mining of Time-Sensitive Spectrum Sensing Data Haining Song, Yujia Tao, Wenwen Qiang, Mingxue Liao, Xia Hou	243
057-M011	Low-dose CT Image Reconstruction via Total Variation and Dictionary Learning XianYu Zhao, JinXu Guo	248
058-Z136	Situation Assessment for Soccer Robots using Deep Neural Network Chunlei Yang, Xinyue Chang, Junjie Chen, Kai Jiang, Lingxiao Cheng, Zhi Zeng, Xuesi Li	252
059-Z139	Deep Semantic Correlation with Adversarial Learning for Cross-Modal Retrieval Yan Hua, Jianhe Du	256
060-Z141	Design of Convolutional Neural Network Based on Reticulated Convolution Module Li Daihui, Yang Lei, Zeng Shangyou, Ma Chengxu	260
Session 7		
061-Z134	Consensus Algorithm for a Private Blockchain Bouvarel Lucas, Páez Rafael V.	264
062-Z035	A New One-time Address Scheme for Blockchain Yili Luo, Zhen Wang, Jia Fan, Yarong Li, Jian Bai	272
063-Z161	An Improvement of Consensus Fault Tolerant Algorithm Applied to Alliance Chain Li He, Zhixin Hou	277
064-Z123	A Two-Layer-Consensus Based Blockchain Architecture for IoT He Bai, Geming Xia, Shaojing Fu	281
065-Z004	An Information Entropy Method to Quantify the Degrees of Decentralization for Blockchain Systems <i>Keke Wu, Bo Peng, Hua Xie, Zhen Huang</i>	287
066-Z156	The Infuluence of Ionoshpheric Perturbation on VLF Propagation Haiyan Yu	293
067-Z155	Uniting Image and Text Deep Networks via Bi-directional Triplet Loss for Retreival	297

	Yan Hua, Jianhe Du	
068-Z149	A Study of Negative Surveys with Background Knowledge Hucheng Liao	301
069-Z140	Short-term Traffic Flow Prediction Based on Bus Floating Car Huang Bohan, Bai Yun	303
070-Z130	Research on Web Service Selection Based on Parallel Skyline Algorithm Liang xinmei, Luqin	307
Session 8		
071-Z154	Image Super-Resolution using a Improved Generative Adversarial Network Han Wang, Wei Wu, Yang Su, Yongsheng Duan, Pengze Wang	312
072-Z114	Classification of Cervical Lesion Images Based on CNN and Transfer Learning NanNan Song, Qian Du	316
073-Z087	Traffic Flow Prediction Based on BRNN Huang Bohan, Bai Yun	320
074-Z085	A Semi-Supervised Short Text Classification Method Based on Weighted Word Vector Representation <i>Zhiming Zhang, Jie Luo, Geyu Huang</i>	324
075-Z067	Prediction of Daily Smoking Behavior Based on Decision Tree Machine Learning Algorithm Yupu Zhang, Jinhai Liu, Zhihang Zhang, Junnan Huang	330
076-Z014	A Neural Network Model for Chinese Sentence Generation with Key Word Ziyao Song, Lizhen Liu, Wei Song, Xinlei Zhao, Chao Du	334
077-M101	Fine-grained Engagement Recognition in Online Larening Environment Tao Huang, Yunshan Mei, Hao Zhang, Sanya Liu, Huali Yang	338
078-M100	An Novel End-to-end Network for Automatic Student Engagement Recognition Hao Zhang, Xiaofan Xiao, Tao Huang, Sanya Liu, Yu Xia, Jia Li	342
079-M088	Human Behavior Analysis Based on Attention Mechanism and LSTM Neural Network Ziqiang Hao, Meng Liu, Zhongyuan Wang, Weida Zhan	346
080-M025	Research on Computing Method of Military Logistics Network Bottleneck Sections <i>Xirui Yang</i>	350
Session 9		
081-M045	Research on High Precision Master-slave Clock Synchronization Based on 1588 Protocol <i>Feilong Shan, Jianguo Yu, Kaile Li, Zhifang Wang, Yongtao Huang</i>	354
082-M092	A Method to Determine Backbone Node of Microwave Relay Network Based on Improved Steiner Point Algorithm <i>Ji Qi, Xiang Zhang, Kebin Chen</i>	359
083-Z002	Single Channel Blind Source Separation Based on Dual-Tree Complex Wavelet Transform And Ensemble Empirical Mode Decomposition <i>Shexiang Ma, Liuyi Yang, Xin Meng</i>	363
084-Z018	Performance Analysis of Polar Codes for Wireless Sensor Networks Quanyv Wang, Wei Zhou, Shouzhen Zhang, Sheng Wang	367

085-Z025	Secure and Efficient Key Management Protocol for Emergency Communications <i>Cungang Yang, Celia Li</i>	372
086-Z030	An Improved Nearest Point based Location Routing Protocol for Maritime Wireless Mesh Networks	376
	Jianxiang Zhu, Rongxi He, Cunqian Yu, Bin Lin	
087-Z033	Greedy Forwarding and Limited Flooding based Routing Protocol for UAV Flying Ad-Hoc networks <i>Fuxing Wang, Zhi Chen, Jing Zhang, Chuan Zhou, Wenjing Yue</i>	380
088-Z060	Semantic Web Technology and Prolog Reasoning Based Task Planning Mechanism and Application in Smart Home for Internet of Things Daoqu Geng, Qi Gao	384
089-Z075	Design and Simulation of an Inverted-L Antenna with Wide Band Fed by Strip Line <i>Bai Jian, Yang Ning, Song Lizhong</i>	388
090-Z102	Removal of Baseline Wander in ECG Signals Using Singular Spectrum Analysis ZhongGao Sun, XinYue Wang, XinJun Wang, KaiXuan Sun, QingQuan Tan	391
Session 10		
091-Z111	A Power Amplifier Linearization Method for TETRA Based on ANN Digital Predistorter Le Ying, Qin Zhang	395
092-Z093	A Software-Defined Radio Oriented Approach in Constructing RF Front-End Circuit Based on Fully Differential Amplifier <i>Jie Liu, Xuan Wang, Ke Gong, Xing Ma, Yajing Yuan</i>	400
093-M090	Target Detection Method Based on Improved Quadratic Feature Fusion Ziqiang Hao, Zhongyuan Wang, Meng Liu, Weida Zhan	404
094-Z082	Class DE-1 Power Amplifiers Zaijun Hua, Fengchen Huang, Jianli Li, Zhao Chen	408
095-Z090	The Uplink Interference Analysis between Closely Separated GSO FSS VSAT Networks in the 27.5-30 GHz Frequency Band <i>Xiaoyan Zhang, Huipeng Shi, Haiyang Liu, Chang Liu, Jie Liu</i>	412
096-Z092	Design of Voltage-Controlled Oscillator with Single-Event Transients Tolerance Xuan Wang, Jie Liu, Guo Chang Zhou, Xiao Ling Lai, Ke Gong	416
097-Z116	The Design and Implementation of Automatic Electronic Water Pump Test System <i>Tao Huang, Tong Zhai</i>	421
098-Z132	A Real-time 2-Dimentional Recovery Algorithm for Blurred Video Image Filmed by Charge-Coupled Devices in Environment Sensing for Driving Safety <i>Wei Nai, Junkai Zhao, Lanfei Ma, Yidan Xing, Huaping Zhu</i>	425
099-Z142	A Comprehensive Review on Train Positioning Technique in Industries with Maglev Included Based on Cross Coding Inductive Loop Wire <i>Wei Nai, Zichao Li, Lanfei Ma, Yidan Xing, Xiang Li</i>	429
100-Z159	Research on Automatic Link Fault Diagnosis Technology Based on CLILPS Yan Liu, Bincheng Li, Junying Xu, Yujie Yang	434
Session 11		

101-M161	An Improved Dijkstra's Algorithm for Shortest Path Planning on 2D Grid Maps Li Wenzheng, Liu Junjun, Yao Shunli	438
102-Z131	Modeling and Analysis of Classroom Teaching Evaluation Platform Based on Colored Petri Nets Yingqi Li, Meiju Yu, Yong Hu	442
103-Z127	Subscription Resource Transfer Protocol Based on Beidou Short Message in Satellite Distance Education System <i>Fangshuo Xin, Xiangyu Bai, Qi Liu</i>	446
104-Z121	Task Allocation Based on Task Deployment in Autonomous Vehicular Cloud Shuo Li, Ru Li	450
105-Z089	Extended Kalman Predictive Filter and Its Application in Theodolite System Lu Changming, Gao Xin, Li Zhiguo, Xie Meilin, Cao Yu, Huang Wei, Lian Xuezhen, Li Zhe	455
106-Z086	Differential Evolution Enhanced with Multiple Dimensional Scaling <i>Minjuan Liu, Wei Huang</i>	461
107-Z080	A Minerals Boundary Enhancement Method in Petrographic Thin Sections Polarization Images <i>Yueru Wen</i>	465
108-Z072	The Method of Calculating Expert Authoritative Value in Group Argumentation Systems Mengcheng Wang, Caiquan Xiong, Tingting Rao	469
109-Z066	An Aircraft Target Detection Method Based on Regional Convolutional Neural Network for Remote Sensing Images <i>Bing Wang, Yan Zhou, Huainian Zhang, Ning Wang</i>	474
110-Z044	The Research and Realization of Public Safety Orientated Panoramic Video Hotspot Interaction Technique <i>Wenqun Xiu, Baoyun Zhang, Zhichao Gao, Wei Liang, Wenguang Qi, Xin Peng</i>	479
Session 12		
111-M042	Analysis and Design of HF Radio Noise Measurement Antennas considering Directivity and Polarization <i>Tiantian Li, Zhigang Zhang</i>	483
112-Z013	Underwater Acoustic Single-Tone Signal Detection Based on Spectral Trend Term Fitting Fang Wang, Yong Chen, Jianwei Wan	487
113-Z019	The Research on Sparse Decomposition of AIS Real-time Signal Shuaiheng Huai, Shufang Zhang, Jingbo Zhang	491
114-Z049	The AES Implementation for Avoiding Single Event Effects for Satellite Application Syed Jahanzeb Hussain Pirzada, Abid Murtaza, Liu Jianwei, Tongge Xu	495
115-Z051	The Parallel CMAC Authenticated Encryption Algorithm for Satellite Communication Syed Jahanzeb Hussain Pirzada, Abid Murtaza, Liu Jianwei, Tongge Xu	499
116-Z050	Power Allocation Algorithm of Optical MIMO NOMA Visible Light Communications Xiaoyi Liu, Hongyi Yu, Yijun Zhu, Erfeng Zhang	504
117-Z057	Floor Control Conflict Resolution in Off-network Mode of MCPTT Shun Feng, Hai Li	509
118-Z063	Research on Personal Assets Operation Based on Low-Power Wide Area Network and Big Data	514

Zhaoyong Fan, Yi Zhu

119-M038	Based on Quantitative Assessment of Geological Structure Complexity by Support Vector Regression S. Guo, G.L. Wang	518
120-Z038	Research on the Influence of Crossover Probability and Mutation Probability in GA-SVM Model Xiujun Wu	522
Session 13		
121-Z163	Hierarchical Multi-constraint Routing Algorithm Based on Software Defined Networking <i>Ruxia Liu, Sudan Li, Hong Wang</i>	529
122-Z178	An Outlier Detection Approach Based on WGAN-Empowered Deep Autoencoder Yunxin Huang, Hongzuo Xu, Xiaodong Wang, Zhiyue Wu	534
123-Z110	Research on 3D Human Pose Estimation Using RGBD Camera Hui Tang, Qing Wang, Hong Chen	538
124-Z083	Emotional Communication Robot Based on 3D Face Model and ASR Technology Ziteng Wu, Lin Zheng	542
125-Z064	Multiple Attention Networks with Temporal Convolution for Machine Reading Comprehension Jiabao Guo, Gang Liu, Caiquan Xiong	546
126-Z041	Sensorless Control Strategy for Interior Permanent Magnet Synchronous Motor Based on ADRC and Differential of Active Flux <i>Weiwei Liu ,Shuguang Ding ,Yinghui Dong, Hao Jin ,Kang Huang ,Zhaoweng Hu</i>	550
127-Z040	A Fire Protection Robot System Based on SLAM Localization and Fire Source Identification <i>Xiaojing Fan, Zhiqiang Xin, Jiatong Li, Yifan Li</i>	555
128-Z169	Availability Assessment of Avionics Display System based on Fault Dependent Matrix Haiyong Dong, Zhengjun Zhai, Yanhong Lu	561
129-Z168	Modeling and Error Accuracy Analysis of Three Satellite Interference Source Location System by Low and High Orbit <i>Haifeng Shuai, Shibing Zhu, Changqing Li</i>	566
130-M040	Design of Space Information Network Task Service Station Huaifeng Shi, Xinyu Li, Li Yang, Chengsheng Pan	573
Session 14		
131-Z164	Single Image Dehazing Using Dark Channel Fusion and Haze Density Weight <i>Wei Mei, Xin Li</i>	579
132-Z177	Fast Style Transfer for Chinese Tranditional Ink Painting Renjie Zhou, Jeong Hoon Han, Hyeon Seok Yang, Woojin Jeong, Young Shik Moon	586
133-Z058	Alleviating the New Item Cold-Start Problem by Combining Image Similarity Dong Cao, Qiang Zhou, Xiujun Wu, Yan Hu	589
134-M160	MOOC-KG: A MOOC Knowledge Graph for Cross-Platform Online Learning Resources Furong Dang, Jintao Tang, Shasha Li	596

135-Z186	A Web Service Matchmaking Approach based on Topic Models Yu Peng, Liu Junju, Wang Jian	604
136-Z175	A Novel Hybrid Evolutionary Algorithm for Pattern Synthesis in Time-modulated Antenna Arrays <i>Yan Liu, Yaming Zhang</i>	608
137-Z174	Linear Frequency Modulation Interference Suppression Based on Subspace Error Correction	611
137-2174	Zhai Yongping, Zhou Zhu	011
138-Z167	Research on Digital Serialization Method of Program Code BaoZhong Liu, JianBin Liu, JingJing Zhao, ChunLan Jiao	616
139-Z166	Research and Optimization for the Election Mechanism of Distributed Wireless Networks Wei Zhang, Ying Liu	622
140-Z165	A Survey of Anonymous Communication Methods in Internet of Things Shunye Wang, Yanhui Du, Tianliang Lu, Jing Wu, Tengfei Wang	627
Session 15		
141-Z181	Development of Machine Learning Based Recommendation Engine for Embedded Programmer Yu Zhou, Suxia Cui, Yonghui Wang	634
142-Z188	Concurrent Self-Identification Applying QR Code to Record Class Attendance (QRClass) Srinual Nalintipwong, Thanarat Tasarika, Chayut Ruksomya, Sirion Vittayakorn, Thanisa Numnonda	638
143-Z185	A Synchrosqueezing Transform based Instantaneous Frequency Estimator Ping Wang, Xianyu Wang	643
144-M110	Design of Convolutional Network Based on Cascade Feng Yanyan, Zhou Yue, Zeng Shangyou, Pan Bing	647
145-M118	A Novel Intelligent Computing basedased Localization Algorithm for Internet of Things <i>Yaming Zhang, Jianhou Gan, Yan Liu</i>	651
146-M058	Prediction of Fire Smoke Concentration Based on Grey-Markov Model Rongrong Wang, Wei Song, Lizhen Liu, Chao Du, Xinlei Zhao	655
147-Z098	Research and Application of Battery Production Data Management System Based on Microservice Jianxin Zhou, Li Li, Ning Zhou	660
148-Z053	Bidirectional Long Short-Term Memory for Sentiment Analysis of Chinese Product Reviews Kai Zhang, Wei Song, Lizhen Liu, Xinlei Zhao, Chao Du	665
149-Z097	BI_Apriori Algorithm: Research and Application Based on Battery Production Data Ning Zhou, Mengshi Qiao, Jianxin Zhou	669
150-Z182	A Comparative Performance of Real-time Big Data Analytic Architectures Apisit Sanla, Thanisa Numnonda	674
Session 16		
151-Z171	PSA: An Architecture for Proactively Securing Protocol-Oblivious SDN Networks Lei Mei, Haojie Tong, Tong Liu, Ye Tian	679

152-M116	SSEEP: State-Switchable Energy-Conserving Routing Protocol for Heterogeneous Wireless Sensor Networks <i>Gang Zhao, Yaxu Li, Lina Zhang</i>	685
153-Z173	View-driven Real-time Sensor Data Processing and Servitization System Zhengqi Zhang, Zhongguo Yang, Yanbo Han, Cheng Di	689
154-Z183	Design and Control of a Sitting/Lying Style Lower Limb Rehabilitation Robot with Magnetorheological Actuators <i>Gaoxin Cheng, Linsen Xu, Shouqi Chen</i>	695
155-Z170	Research and Application of APT Attack Defense and Detection Technology Based on Big Data Technology Donglan Liu, Hao Zhang, Hao Yu, Xin Liu, Yong Zhao, Guodong Lv	701
156-M120	A Brief Review of the Intelligent Algorithm for Traveling Salesman Problem in UAV Route Planning <i>Yunpeng Xu, Chang Che</i>	705
157-Z157	Study on the Influence of the Distribution of Convolution Kernels Jipeng Zhao, Zhaobin Wang	712
158-Z189	Application of XGBoost in Identification of Power Quality Disturbance Sources of Steady-state Disturbance Events <i>Liu Yang, Cheng Di, Yi Li</i>	716
159-Z187	Research on Airport Perimeter Monitoring Alarm Method of Based on Video Signal and Capacitance Disturbance Signals <i>Ping Zhang, Denghong Yin, Minmin Liu, Bo Li</i>	722
160-M083	Emotional Communication Robot Based on 3D Face Model and ASR Technology Ziteng Wu, Lin Zheng	726