

2018 IEEE 4th Information Technology and Mechatronics Engineering Conference (ITOEC 2018)

**Chongqing, China
14-16 December 2018**

Pages 1-654



**IEEE Catalog Number: CFP18HAD-POD
ISBN: 978-1-5386-5374-6**

**Copyright © 2018 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:	CFP18HAD-POD
ISBN (Print-On-Demand):	978-1-5386-5374-6
ISBN (Online):	978-1-5386-5373-9

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

4	Distribution Network Topology Modelling and Automatic Mapping Based on CIM and GIS <i>Lixian Wu, Yujie Lin, Weilin Pang</i>	1
5	Stability Evaluation Algorithm of Filtering Algorithm in Navigation Information Processing <i>Chao Ji, Xiao-dong YANG, Xiu-liang DAI</i>	6
7	Feature extraction of workpiece circular contour based on Sobel operator <i>Jinhua Guo, Chunjian Hua, Xuemei Xiong</i>	11
8	A Cortex-M3-Based System-On-Chip Architecture for Wireless Communications in Power Grid <i>Yingying Chi, Weilong Zhang, Zhe Zheng, Wenpeng Cui</i>	16
9	Study on the temperature distribution of the outer surface of the cable intermediate joint based on ANSYS simulation <i>Aqin Zhao, Liang Gu</i>	20
10	Research On Feature Extraction Method For Motor Rotor Broken Bar Based On Optimized Wavelet Packet Analysis <i>Ming Yang, Weifeng Shi</i>	24
11	Improved Edge Detection Algorithm of High-Resolution Remote Sensing Images based on Fast Guided Filter <i>Hanmin Ye, Min Ding, Shili Yan</i>	29
12	Failure prediction for linear ball bearings based on wavelet transformation and self-organizing map <i>Jiankang Zhong, Kewei Yang</i>	34
14	Elimination of External Acceleration of AHRS Based on Secondary Cubature Kalman Filtering <i>Xin Zhao, Xiaolei Ning, Yang Ren, Zhoupeng Yang</i>	39
21	Three-state Feedback Control of Electro-hydraulic Servo Shaking Table Based on State Space Research <i>Wei Wei, Xingbao Liu, Shaoxing Ma</i>	44
22	Research on soft sensing of formation heat of cement clinker based on LS_SVM <i>Fangqian Ning, Hongliang Yu, Shizeng Lu</i>	48
23	Design and Implementation of FFT Signal Processing System for Ion Mobility Spectrometer <i>Genwei Zhang, Shuya Cao, Jiang Zhao, Qibin Huang</i>	52
24	A Faster Vehicle License Plate Localization Algorithm Using Multi feature Fusion Method <i>Zhi-Jie Zhang, Qing-Rui Li, Shuo Yang</i>	56

27	An Android Application for Plant Identification <i>Qian Cheng, Hongyan Zhao, Chuang Wang, Haimei Du</i>	60
29	Vibration Decoupling Optimization of Automobile Engine Suspension Mounting System <i>Huanmei Ren, Peng Nai</i>	65
30	The Research of Dynamic Spectrum Allocation Based on Nash Bargaining Game <i>Peijun Li, Bo Han, Heng Li, Dayou Hou, Dongdong Liu, Guangyang Wang</i>	70
31	Research on Modeling of cement denitrification under typical working conditions <i>Guangcheng Du, Qingjin Meng, Hongliang Yu</i>	75
32	A Novel Spectrum Sensing based joint Relaying and Jamming Method for Secure Relay Networks <i>Jinxi Li, Chensi Zhang</i>	82
33	Multi-control Strategy Combinatorial Control of Burning Temperature of Cement Rotary Kiln <i>Shizeng Lu, Hongliang Yu, Xiaohong Wang, Fangqian Ning, Peirui Zhao</i>	86
34	A Control Platform Design of Servo System Based on Image Positioning in Wind Farm <i>Shijun Wang, Chang Ping, Yiming Zhou, Yong Wei, Xiuli Wang</i>	91
36	Dielectric Resonator Based Millimeter Wave Array Antenna <i>Wenzhe Liu, Boyuan Ma, Yang Deqiang</i>	95
37	Novel Metal Fixture with Extra Tuning Function for Millimeter Wave Cylindrical Dielectric Resonator Antenna <i>Wenzhe Liu, Boyuan Ma, Yang Deqiang</i>	99
38	Extraction of Trend Data of Cement Raw Material Based on On-line Analyzer <i>Xueqing Wang, Xiaohong Wang, Hongliang Yu</i>	103
39	Cooperative Location Method of Muti-UAV System under Environment of Communication Jamming based on Tri-Layer Trust Model <i>Zhaoxia Li, Jie Xu, Qing Guo</i>	108
40	Dynamic Transmission Error analysis for CNC Machine Tools under variable speed condition <i>Xiangxi Du, Yanhua Sun</i>	113
43	Fuzzy Neural Network based Sliding Mode Control for Hypersonic Vehicles <i>Xingge Li, Gang Li, Xuchao Kang, Siyu Xiong, Siyuan Zhao</i>	121
44	Application of Virtual Reality Technology in Computer Practice Teaching <i>Jin Wang</i>	129

45	Design of Software-Defined-Satellite-based PID Attitude Control Application in Python <i>Yu-Jia Zhai,Zhe-Yuan Lin</i>	133
47	Research on Preparation Condition of Cement Raw Material Based on Clustering <i>Bing Huang, Xiaohong Wang,Hongliang Yu</i>	138
48	On Bayes Method for Determination of Fault Sample Size Based on Post-test Risk <i>Kui Zhou,Shiyan Sun,Qiang Sun</i>	144
49	A Novel Approach for the Analysis and Synthesis of High Order Directional Modulation <i>Long Cheng, Xinyu Xiong,Leixin Shi,Shaoqian Li</i>	149
51	Frequency Measurement by FFT and Frequency Counting <i>Tao Tang,Jin Pan ,Deqiang Yang</i>	154
52	Research on Kinematic Modeling and Analysis Methods of UR Robot <i>Qiang Liu, Daoguo Yang, Weidong Hao, Yao Wei</i>	159
53	Research on Key Technologies of Internet Public Opinion Monitoring and Analysis System <i>Xiejie Hu, Chuan Lu</i>	165
54	Research on Artificial Intelligence Modeling Methods for Internet Public Opinion Information <i>Xinjie Hu,Yunan Lu</i>	170
55	A Tunnel Crack Identification Algorithm with Convolutional Neural Networks <i>Qimin Gong,Yaodong Wang,Zujun Yu, Liqiang Zhu,Hongmei Shi,Haitao Huang</i>	175
56	A novel no-reference video quality assessment algorithm <i>Lin Yang, Yingyun Yang,Yong Ma</i>	181
57	Research on Cracks Image Detection System for Subway Tunnel <i>Xuanran Liu, Yaodong Wang, Zujun Yu, Liqiang Zhu, Hongmei Shi, Haitao Huang</i>	188
60	Autonomous Launch and Recovery Mechanism for USV <i>Jiaxin Chen,Jianxiang Cui,Haijun Chen,Jun Luo ,Junfeng Yao</i>	193
61	Design of Unmanned Surface Vehicle for Submarine Pipeline Detection <i>Haijun Chen,Chuan Zhu ,Jiaxin Chen ,Yan Peng ,Junfeng Yao</i>	198
63	Deformation Measurement Method of Spacecraft Structure based on Speckle Pattern Interferometry and Digital Image Correlation <i>Li Tao,Zaihua Yang ,Guowei Ruan,Wangmin Yi</i>	203
65	The Application of BP Neural Network in Incinerator Model Identification <i>Tianran Wang, Ziqiang Wang,Xiang Fang</i>	208

66	A Deep Network for Pornographic Image Recognition Based on Feature Visualization Analysis <i>Zefeng Ying, Ping Shi, Da Pan, Hongtao Yang, Ming Hou</i>	212
67	Analysis and Comparative Research of XML Parsing Technology <i>Hui Jiang, Yujie Li</i>	217
69	Design of Digital Lock-in Amplifier Based on DSP Builder <i>Ruipeng Li, Haobin Dong</i>	222
70	An Automatic Interpretation Method based on Parameter Threshold for Space Utilization Payloads <i>Huiping Wang, Shilong Yang, Lei Song, Shan Jin, Yuanyuan Sun, Lili Guo</i>	228
71	An Improved RRT Algorithm for The Motion Planning of Robot Manipulator Picking up Scattered Piston <i>Tangfei Tao, Xiang Zheng, Hua He, Jiayu Xu, Bo He</i>	234
74	Study on SF6 Gas On-line Monitoring Method Based on Machine Learning <i>Shijun Wang, Yi Xia, Chang Ping, Guobin Xue</i>	240
75	Generation Mechanism and Suppression Strategy of Background Harmonic Current at MMC AC Side <i>Jiying Shi, Risheng Fang, Wujie Chao, Bidan Qiu, Sheng Shi</i>	245
78	FPGA Interconnect Resources Test Based on A Improved Ford-Fulkerson Algorithm <i>Ruipeng Bai, Hui Guo, Zhenzhong Wang, Yanlong Zhang, Fan Zhang, Lei Chen</i>	251
79	Discussion on Cyber Security Awareness and Awareness Model Building Based on Connectionism <i>LI Jixing, WANG Yu, QI Bin</i>	259
80	Study on Equivalent Modeling Technology of Helicopter Complex Skin Structure <i>Kaili Zhao, Yunfeng Jia</i>	264
81	Synchronous Condenser 's Application and the Effect of Loss of Excitation on HVDC Receiving End <i>Wang Xiaoyang, Li Yanjun, Zhan Rongrong, Hao Liangliang, GUO Zhilin, Gui Lin</i>	269
82	A low power and ultra long range UAV attitude measurement system <i>Jianliang Xiang, Xinhua Zhu, Tong Zhou, Yan Su</i>	275
83	Parallel Design of CMF Signal Processing <i>Guodong Hu, Zhengping Feng, Anyuan Bi, Qiang Pang</i>	279
84	Fault-Tolerant Control for Six Rotor Unmanned Aerial Vehicle Attitude System <i>Yibo Li, Qiushi Li</i>	284

85	Range Migration and Spatial Variability Correction of FMCW SAR Imaging Based on NUFFT <i>Depeng Song, Binbing Li, Yi Qu, Liuyun Chen</i>	291
88	SPIFFY: A Simpler Image Viewer for Medical Imaging <i>Jiayu Sun, Shekhar S. Chandra</i>	297
89	Structural Dynamic Performance Evaluation of Industrial Robots Based on Vibration Tests <i>Xiong Xiong, Yuwen Li, Haojie Qin</i>	302
91	A Compound Method for Identifying and Suppressing the Thrust Fluctuation of Synchronous Linear Motor <i>Jian Lin, Gaoshuo Xie, Xinxin Shi, Lei Zhou, Tongtong Wang, Han Liu</i>	307
96	Overview of Wearable Haptic Force Feedback Devices and A Further Discussion On The Actuation Systems <i>Sijia Cao, Xue Li, Xiutian Yan, Dikai Jiang, Qiaochu Guo</i>	314
97	Technology Research on CH₄ Sensor with Pd Catalyst using Supported Nano-material Carrier of γ-Al₂O₃-ZrO₂-ThO₂ <i>Hong-quan Zhang, Kai Zhang, Qing Zhang, Ai-dong Liu</i>	320
98	Study on the optimal dispatching algorithm of ships in and out of tidal two-way channel <i>Pei YiLou, Chen DeJun</i>	324
99	A Classification Algorithm for Water Environment Health Risk Assessment based on Unascertained Mathematics and Its Application <i>Yiming Wei, Zengchuan Dong, Wei Xu, Dayong Li, Fangyu Zhang</i>	330
100	A Beam-forming Method based on Constant Modulus Algorithm combined with Gradient Algorithm <i>Shazhou Jin, Yong Zhang, Danqing Yan, Zhongjin Zhang, Lufei He</i>	335
102	Research on personalized recommendation of distance education resources based on spark <i>Zhufeng Qiao, Jianxin Guo, Jichun Zhao</i>	338
103	An Resilient Cloud Architecture for Mission Assurance <i>Jing Yu, Feng Ding, Xin Zhao, Yabin Wang</i>	343
104	An Improved Criterion for Uncertain Neutral-type Lur'e Systems with Time-varying Delay via a Novel Double Integral Inequality <i>Peng Zhang, Tao Shen, Yuan Xu</i>	347
105	An Intelligent Wave Attenuation System Design based on Internet of Things <i>Yue Zhou, Zengchuan Dong, Wei Xu, Jie Ren, Yiming Wei, Fangyu Zhang, Biao Sun, Yuanming Wang</i>	354
106	Design and Implementation of Low Power FMCW Radar System <i>Jin Kun, Chen Shaochang</i>	359
108	Development of Design System for Spatial Cam Reducer <i>Zheng-hao Ge, Peng-yu Bai, Yun-yun Qi, Shan-shan Ren, Xiang-zhen Xue, Xiao-hu Han</i>	364

110	Dynamic Model of Robot Control System for Measurement Terminal <i>Bo Li, Min Cao, Shilin Li, Linshan Zhang, Qingshan Liu, Chunyang Li, Kaiyang Zhang, Xianpei Wang, Meng Tian</i>	369
111	Research on Cleaning and Drying Process of Quartz Wafer based on Orthogonal Experiment <i>Guicong Wang, Yingjun Li, Xuan Sun, Naijian Chen, Shu Huang</i>	375
112	Design of Meander Line Dual-Circular Polarizers with Finite Aperture <i>Xue Haoren, Pan Jin, Ma Boyuan, Yang Deqiang</i>	380
113	Dual-Function Meander Line Circular Polarizer in C band <i>Xue Haoren, Pan Jin, Ma Boyuan, Yang Deqiang</i>	384
114	Data Independent Karhunen-Loève Transform for Image and Video Coding <i>Wen Tan, Xue-Dong Liu, Chuang-Ceng Huang, Jun Wan</i>	388
115	Remote Sensing Scene Classification Based on Decision-Level Fusion <i>Xiaobin Li, Bitao Jiang, Tong Sun, Shengjin Wang</i>	393
117	User Mining Algorithm Based On PageRank Modeling Improvement and Comprehensive Influence Evaluation <i>Fuyun He, Binbin Huang, Yanting Shen, Zebin Yang</i>	398
118	Matrix Factorization Recommendation Algorithm Incorporating Tag Factor <i>Mengmeng Lu, Pei Tian</i>	403
119	High Spatial-spectral Resolution Image Fusion Algorithm Based on Spectral Mixture Analysis <i>Liyan Wang, Zhe Xing, Dong Zhao, Yanwen Li, Xiaotong Yang, Chen Hou, Peng Li, Xianren Zhao</i>	408
120	Differential Evolutionary modeling and starting-up cavitation characteristics analysis for multistage centrifugal pump <i>Haibo Qin, He Ni, Jiashan Jin</i>	412
124	The Fingerprinting Analysis of Power Amplifier Predistortion Error from Wideband Signals <i>Jingzhi Zhang, Xiang Chen, Nae Zheng, Long Zhang</i>	417
125	Analysis and Simulation of Acceleration Compensation Mechanism for Piezoelectric Pressure Sensors <i>Cong Yang, Yingjun Li, Guicong Wang</i>	422
126	A New Carrier Based Neutral Point Potential Control Strategy for Three-Level NPC Converter <i>Song Bo, LI Xinyi, LI Wanting, ZHANG Hui, LI Ning</i>	427
127	Comparative Research on Common-mode Voltage of T-type Three-level Converter Caused by Modulation Strategy <i>WEI Jinxin, CAO Mu, LI Ning, ZHAO Dan</i>	432

128	A Novel Power Quality Disturbance Recognition Method Based on Improved HHT Algorithm <i>LI Ning, HE Fuxing, LI Xinyi, SUN Xiaoqiang, Zhang Xiaoqi</i>	436
130	Structural Learning Of Bayesian Network By Multi-population Bacterial Foraging Optimization <i>Zhen Li, Tong Liu, Linbo Zhang, Kan Wang</i>	441
131	An algorithm of Building Extraction by Fusing Spectral and Geometrical Features <i>Manyun He, Lin Wang</i>	446
132	Design of Specification for Data Communication Interface in Bus Rapid Transit (BRT) Intelligent System <i>WANG Xiaokun, HU Baoyu, JIANG Guangtian, GUAN Deyong, CHEN Weiqiang</i>	451
133	The high precise conversion method of detection and suppression coordinate system <i>WANG Xun, GUO Meng, ZHOU Lian, SUN Ming-Jiao, WANG Wen-Tao, CHEN Ri-Ming, LI Shu</i>	457
134	A classification method of Active Protection System radar for distinguishing moving missiles <i>SONG Hai-ping, WANG Xun, ZHOU Lian, WANG Wen-Tao, CHEN Ri-Ming, CHEN Hai-rui, SUN Ming-jiao</i>	462
135	Fault-Tolerant Scheduling Algorithm for Periodic Real-Time Tasks in Clouds <i>Pengze Guo, Ming Liu, Zhi Xue</i>	467
136	Interaction with a Electric Wheelchair Using a Laser Pointer <i>Yaxin Liu, Yanqiang Zhang, Yufeng Yao, Ming Zhong</i>	471
138	A stereoscopic symmetrical quadruple mass gyroscope <i>Xin Guo, Bo Yang, Cheng Li</i>	476
139	Study on the method of pseudo distance measurement based on DTMB signal <i>Shuxuan Chen, Shanhe Wang, Changjiang Huang, Yu Xiang, Baisheng Yang</i>	480
142	Classification for target model Based on fuzzy integral function <i>Ling Wang, Renhui Zhang, Qingyang Guan</i>	485
143	A modified algorithm of Guetzli encoder <i>Sizhe Fu, Ping Shi, Da Pan</i>	490
146	A Review of Semantic Segmentation Based on Context Information <i>Wei Xu, Sanxing Cao, Lingjun Yang</i>	494
147	Directional Folded Antenna for Brain Stroke Detection Based on Classification Algorithm <i>Yizhi Wu, Deng Pan</i>	499
150	Safety Risk Control System based on UWB and 3D Visualization in Metallurgical Operation <i>Enji Sun, Haoyu Wang, Feifei Wang</i>	504

151	Matlab Programming Environment Based on Web <i>Liu Yu</i>	509
152	Remote Monitoring and Control System for Bio-fermentation Process Based on Embedded Internet <i>Xuelei Sun, Qin Shi</i>	513
153	Compact Dual-band Slot Antenna for WIFI Applications <i>Hu Jianzhong , Yang Deqiang , Mao Ningxin, Liu Wenzhe</i>	517
154	A Balances Energy Consumption Clustering Routing Protocol for a Wireless Sensor Network <i>Xin Zhao, Zhiqiang Wei, Yanping Cong, Bo Yin</i>	521
155	The Study of Load Identification Based on Raw Current Data <i>Liwen Zhao, Bo Yin</i>	528
156	Image Edge Detection Based on a Spatial General Autoregressive Model <i>Fei Hao , Ruwen Chen, Fan Wang, Delin Chen, Jingjing Shi, Yuntao Hu</i>	535
157	B1C Signal Modulation Implementation and Acquisition Research <i>Yufei Ren, Xiaochun Lu, Rui Feng, Xue Wang</i>	540
159	Fault Diagnosis of Aero-engine Bearing Using a Stacked Auto-Encoder Network <i>XueSen Lin, BenWei Li, XinYi Yang, JingLin Wang</i>	545
160	Research on Large Scale Terrain Generation Method Based on Geometry Clipmap Algorithm <i>Guannan He, Feng Tian , Guanglei Meng, Yan Tian</i>	549
161	Vehicle Personnel Identification Model Based on Optimized ST-DBSCAN Algorithm <i>Bin Chen, Yunxiang Liu, Wei Shi</i>	554
162	A Review of Representation, Model, Algorithm and Constraints for Mobile Robot Path Planning <i>Lianjun Ou, Wenwen Liu, Xiutian Yan, Yukun Chen, Jun Liang</i>	563
163	The comparison analysis of typical control strategies for LCL type inverter in Frequency domain <i>Juntao Jiang, Hui Jin</i>	570
164	Modeling and Simulation of Angle Tracking Based on Antenna Pattern Under Multipath Effect <i>Tingting Wang , Jiaqi Sun , Xiaobo Wang, Xiaoli Yu, Xiuli Xue</i>	576
165	Trajectory Planning of Free-floating Space Robot Using an Improved PSO Algorithm <i>Zhanxia Zhu, Jianfei Zhong, Sa Jing, Biwei Tang</i>	580
167	No-reference Distorted Image Quality Assessment Based on Deep Learning <i>Chang Guo, Haoting Liu, Shunliang Pan, Weidong Dong, Shuo Yang, Guoliang Tian</i>	586

168	BP Neural Network Data Fusion algorithm optimized based on adaptive fuzzy particle swarm optimization* <i>Mengjie Yang ,Yushui Geng ,Kun Yu ,Xuemei Li ,Shudong Zhang</i>	592
169	Suspension Optimization Design and Virtual Prototype Simulation Analysis of FSAE Racing Car <i>Yunxiang Liu, Bin Chen, Wei Shi</i>	598
170	Design of networked monitor system for environmental radioactive aerosol <i>Ge Wang ,Hongkun Xu,Zihan Huang,Yin Yin ,Changli Mu</i>	606
172	Multi-stream I3D Network for Fine-grained Action Recognition <i>Jian You, Ping Shi, Xiaojie Bao</i>	611
173	Distributed Optimal Formation Control with Collision Avoidance <i>Pengfei Jin ,Jianqiao Yu,Xiaolin Ai,Yuanchuan Shen</i>	615
174	Robot Navigation Method based on Intelligent Evolution <i>Zehao Li, Guanghao Chen, Bingnan Peng , Xiaqing Zhu</i>	620
176	Actuator fault reconstruction based on adaptive sliding mode observer for unmatched nonlinear system <i>HAN Si-cong, GUO Chuang</i>	630
178	Design and implementation of a CMOS charge pump phase-locked loop <i>Zhang Yapeng, Ye Tianxiang, Qu Zhijuan</i>	635
179	Development of Automatic Welding Machine for Tube-to-Tubesheet Joints of Heat Exchanger <i>WU Yi-fei, FU Qiang,QI Jia-cheng,LIU Yu, Yang Mo</i>	641
180	Experimental Research on the Precise Finding System of Close Range FM Radio <i>Jianli Xia, Zhaohui Zheng, Wenhui Zhang</i>	645
182	A Node Localization Algorithm in WSNs Based on Iterative Estimation <i>Rui Jiang, Qian Wu, Youyun Xu</i>	650
183	Influence of the Voltage Level on the Propagation Characteristics of Optical Signals Gener-ated by GIL Partial Discharge <i>Yue Zhang ,Yongpeng Xu,Yong Qian ,Xue Qin ,Xiuchen Jiang ,Zhengcai Fu</i>	655
185	A novel power calibration method for microwave digestion system <i>Tianlei Xiao, Xiaochen Mao, Kun Fu</i>	659
187	The Intelligent Search Method of Ambiguity Function Main Ridge Based on the Adaptive Differential Evolution Algorithm <i>Yunwei Pu ,Lanyu Ma ,Wentai Hou,Yuanpu Guo</i>	663

188	Accurate Measurement of Optical Angle Sensing based on Polynomial Fitting Tool <i>Guangyu Liu , Lihua Qin,Wujia Yu</i>	668
189	ROBOCON2018 Robot Overall Control System Design(Passing Robot) <i>Leitao Yu,Dazhang You,Lian Yu</i>	672
190	System-level Test Scheme Design and Implementation of Dynamic-probe Attitude Maneuver Mode for Astronomy Observation satellite <i>Rongzheng Luo, Zhidong Li, Zhiyun Tan, Jian Liang, He Gao, Shuo Feng</i>	676
191	Research on High Precision Terrain Dynamic Loading Technology Based on Flight Trajectory Prediction <i>Junwei Wu,Zhen Chen ,Guanglei Meng ,Huimin Zhang</i>	682
192	A Simulation Study on Optical Signal Propagation Characteristics of Partial Discharge in Single-core and Three-cores GIL <i>Yue Zhang ,Yongpeng Xu,Yong Qian ,Xue Qin ,Xiuchen Jiang,Zhengcai Fu</i>	688
193	Quasi-distributed temperature detection based on multi-wavelength demodulation technology <i>Sun Chao, Qi Hui,Jianjun Ding, Yang Piao, Zhang Mingyang</i>	692
194	Research and Design of No-contact Tap-charger On-load Voltage Regulator in 10KV Distribution Network <i>Yong Wan ,Qinlin Zhu ,Youhua Jiang</i>	696
195	Harmonic Detection in Electric Power System Using Wavelet Transform and Particle Swarm Optimization <i>He Yan,Bo Yin,Mingxing Gao</i>	701
196	Observer-based Sliding Mode Attitude Controller Design for Spacecraft with Fuel Slosh <i>Ting Yu,Longjun Qian</i>	705
198	Design of Control System for Warehouse based on PLC <i>Chao Lv , Jiaan Wang , Tianyuan Deng</i>	711
199	Multi-objective Optimal Design of Hybrid Active Power Filter based on genetic particle swarm composite algorithm <i>Yong Wan, Jingjie Qu, Youhua Jiang</i>	715
201	Research on autonomous navigation of mobile robot based on multi ultrasonic sensor fusion <i>Rui Wang, Lei Chen, Jie Wang, Pei Zhang, Qimeng Tan, Dong Pan</i>	720
202	A Comprehensive Biomechanical Information Acquisition Platform for Human Motion <i>Hu Rui,Dong Rui,Tang Yi</i>	726
203	Adaptive Sliding Mode Control for Electro-hydraulic Position Servo System of the Elevation-balancing Machine of Artillery Platform <i>Shoucheng Nie, Linfang Qian, Lingfei Tian, Quan Zou</i>	731

205	Speed control characteristics of ultrasonic motor drive control system based on DDS <i>Xiangyang You</i>	736
206	Analysis and Simulation of SAR Jamming Principle <i>Huabing Yang,Guangxue Wang ,Wei Luo ,Jing Deng</i>	740
207	A Novel Optimized Trajectory Planning Method via Spline Function Theorems <i>Guangyu Liu, Shangliang Wu</i>	745
208	Positive ramp compensation of Boost converter and its impact on Electromagnetic Interference <i>Qianqian Ling ,Yufui Zhou ,Hao Li</i>	750
210	Node selection method based on Markov location prediction in vehicle networking <i>Jiayun Yan, Can Chen, Dengyin Zhang</i>	754
212	Study on Simulation Calculation Method of Radar Wind Load Moment <i>Gongli Tan ,Xuequn Wu ,Yiming Liu</i>	759
213	A single image dehazing method based on sky recognition and average saturation prior <i>Huanhuan Bao,Dengyin Zhang,Xuan Zhao</i>	766
214	Attentive Autoencoder Matrix Factorization for Recommender Systems <i>Dawei Zang ,Weibin Guo ,Zongyin Li, Yu Liu</i>	771
215	Improving Q-factor of electromagnetically induced transparency based on mirrored metasurface <i>Haiming Li, Youyun Xu</i>	778
216	Research on the Relationship between Hot Spot Transient Temperature Rise and Ambient Temperature of Oil-immersed Transformer <i>Chenlong Li ,Zhaoxin Wang ,Lixin Fan,Yongqiang Wang ,Haijun Chu</i>	782
218	Research on Recognition System of Facial Expression for the Robot to Help Elder and Disabled <i>Hao Jiang,Hailun Li, Zhiguo Zhang</i>	787
219	A Cervical Intraepithelial Neoplasia Classification Method Using Feature Extraction and Back Propagation Neural Network <i>Hongwei Du,Jun Liu ,Han Lu</i>	794
220	Object Detection Based on YOLO Network <i>Chengji Liu,Yufan Tao ,Jiawei Liang ,Kai Li ,Yihang Chen</i>	799
221	ROI Adaptive Segmentation Method Based on Vanishing Point and Vehicle Height <i>Lifu Li ,Wenying Zhang ,Hui Zhou ,Jinwen Hu</i>	804
222	A Wi-Fi based Pedestrian Navigation System using Kalman Filter and Particle Filter <i>Chen Chen</i>	810

223	Design Research on Submarine Cooperative Combat Simulation System Based on Underwater Self-organizing Network <i>Pengfei PENG, Zekun XIE, Min YANG</i>	815
224	Research on Interleaved Boost Converter with Coupled Inductors for Fuel Cells <i>Zhenwei Song, Yuquan Jiao, GuoPing Dai, Hui Liu, Jun Ma</i>	819
225	UAV Autonomous landing algorithm based on machine vision <i>Cheng Xu, Yuanheng Tang, Zuotang Liang, Hao Yin</i>	824
226	Multichannel Sub-Nyquist Sampling for Ultrasound Imaging Applications <i>Zhijun Pei, Yaxin Wang</i>	830
228	An anomaly detection model of user behavior based on similarity clustering <i>Shuai Hu, Zhihua Xiao, Qiang Rao, Rongtao Liao</i>	835
230	Accurate 2D Localization for Mobile Robot by Multi-sensor Fusion <i>Xiaogang Ruan, Shaoda Liu, Dingqi Ren, Xiaoqing Zhu</i>	839
231	Connection Pattern Based Android Network Traffic Clustering <i>Chunlei Chen, Huixiang Zhang, Ming Qi, Yonghui Zhang, Peng Zhang</i>	844
232	A Robotic Grasping Algorithm based on Simplified Image and Deep Convolutional Neural Network <i>Tian Mu, Bo Yuan, Haibin Yu, Yu Kang</i>	849
233	Sequential Inverse Covariance Intersection Fusion Steady-state Kalman Filter for Multi-Sensor Systems with Multiple Time-delayed Measurements <i>Tianmeng Shang, Qi Liu, Yuan Gao, Chenjian Ran, Yinfeng Dou</i>	856
234	Simulation analysis of converter transformer excitation current and reactive power loss in DC bias based on field circuit coupling <i>Xiaoyue Zhang, Weili Wu</i>	861
235	A Palmprint Classification Method based on Local Sparse Coding <i>Dongliang Yang, Changjiang Song, Gang Wu</i>	865
236	Boosting Gabor Feature Extraction for Gesture Recognition using Tri-axis Accelerometer <i>Zhenyu He, Zhenya He</i>	869
238	Research on Data Exchange Mechanism of Power Trading <i>Fei Ye, Ping Shao, Yanmin Guo, Xinhong Shi, Xu Zhang, Jiajia Pan, Shuhai Feng</i>	874
239	Simulation of Information Bidirectional Transmission Using Single Switch Receiver in a SWIPT System <i>Jie Wu, Chongyan Zhao, Shuaibiao He, Nan Jin, Zhifeng Dou</i>	879
241	A Novel Polyphase Filtering Channelization Based Dehopping Scheme <i>Yingping Xiao</i>	884

242	Human-Computer Interaction Using Fingertip Based on Kinect <i>Yanbo Tao, Zhiwen Yao, Bin Liang</i>	888
243	Lower-Limb Soft Orthotic Device for Gait Assistance <i>Yutong Gu, Yuxiang Lv, Xiaoyuan Ma, Changhou Lu</i>	894
244	Composite MPPT Control Algorithm with Partial Shading on PV arrays <i>Yan Sun, Zhuo Lou, Zhipeng Xi, Zhejing Bao, Xiaoxia Li, Wenjun Yan</i>	898
246	Stereovision Based Generic Obstacle Detection and Motion Estimation Using V-stxiei Algorithm <i>Hang Ding, Liguang Tian, Yue Liu, Meng li, Beibei Guan</i>	903
247	DC-Link Voltage Fluctuation Reduction of Vector Controlled PMSM Drives with Reduced DC-Link Capacitor <i>Ke Li, Yi Wang</i>	909
248	Optimized Decision Making for Power Grid Safety Correction Based on Sub-regional Load Control <i>Yi WANG, Xin SHAN, Guoqiang ZHA</i>	913
249	Research on Jamming Method of Tactical Internet Ultra short Wave Communication based on VRNET Simulation <i>Yingying Chen, Xinwang Yang, Jiankang Yang</i>	918
250	Investigations on the reaction characteristics of direct carbon fuel cell with molten antimony anode <i>Yibo Zhao, Ding Ding, Xiaochen Mao</i>	921
251	Review of the development of metal non-destructive testing and imaging technology <i>Xiaochen Mao, Yibo Zhao, Tianlei Xiao</i>	926
252	Analysis of dynamic characteristic and parameter sensitivity of diamond back wing <i>Meihong Li, Hua Li</i>	930
253	Design and Research of Visual Pipeline Robot Based on Wi-Fi <i>Yingsong Chen, Zhouping Cui, Huijie Zhang, Lihong Wu</i>	935
255	Medical Data Quality Assessment Model Based on Credibility Analysis <i>Songting Zan, Xu Zhang</i>	940
257	Circuit Design of Energy Dispersive X-ray Fluorescence Analysis System <i>Xu Han</i>	945
259	Convolutional LSTM Networks and RGB-D Video for Human Motion Recognition <i>Weisong Che, Shuhua Peng</i>	951
260	Research on Fuzzy PID Control Algorithm for Lower Limb Rehabilitation Robot <i>Hongbo Wang, Tingting Lu, Baoshan Niu, Hao Yan, Xincheng Wang, Jianyu Chen, Yungui Li</i>	956

261	Analysis of Embedding Dimension of Built-in sensor Nonlinear Output <i>Ning Zhao, Junjie Shen, Yuhe Liu, Xiaolin Ma</i>	961
262	Single-Channel Dataflow for Convolutional Neural Network Accelerator <i>Yihuang Li ,Sheng Ma,Yang Guo ,Guilin Chen,Rui Xu</i>	966
263	Threshold Re-weighting Attention Mechanism for Speaker Verification <i>Bo Li,Xiaodong Cai</i>	971
265	Experimental Research on Breakdown Characteristics of Transformer Oil at Low Temperature <i>Wenqing Lai,Wenpeng Li,Mengke Li,Hui Meng,Hailong Wang ,Guangxin Jiang,Xu Cao,Yicheng Geng,Yongqiang Wang</i>	975
266	Research on SDN Load Balancing based on Ant Colony Optimization Algorithm <i>Jingmei Li , Linfeng Yang ,Jiaxiang Wang, Shuang Yang</i>	979
267	A Time-based Self-Cleaning Control Mechanism in Moving Target Defense <i>Hua Zhou, Yufeng Ma, Lingbo Yan, Ningyan Wang</i>	983
268	Fast Inter Mode Decision Algorithms for x265 <i>Fan Mu,Hao Zhang,Xianru Liu</i>	987
269	Dynamic Network Security Situation Prediction based on Bayesian Attack Graph and Big Data <i>Pengwen Lin, Yonghong Chen</i>	992
270	The Study of Online Financial Information Service Quality Evaluation <i>Jin Nie ,Zhanggen Guo ,Shunxiu Luo</i>	999
272	Design and Implementation of Differential Frequency Hopping Communication System Based on FPGA <i>Qi Yingchao,Yongxin Feng</i>	1006
273	A novel object detection before tracking filter framework for assistive robot under global vision <i>Lei Sun, Sun-an Wang, Hua Chen , Yangquan Chen</i>	1011
274	Performance analysis of Differential Frequency Hopping Communication system over Rician channel <i>Siyao Xie,Bo Qian</i>	1015
275	Research on Dynamic Trajectory Planning of Collaborative Robots Base on RRT-RV Algorithm <i>Guodong Liu, Yong Jiang</i>	1020
276	Parameter Design Method of a Series-parallel Resonant Converter <i>Zhengzhang Song ,Yun Gao ,Pu Shang</i>	1024
277	Structural design and optimization of modular underactuated multi-fingered manipulator <i>TANG Shufeng,YU Yue,LIANG Wei</i>	1028

278	Low-cost Quadrotor Attitude Solution Based on Improved Complementary Filtering <i>Pu Shang ,Yun Gao ,Zhengzhang Song</i>	1037
279	A Study on Driving Behavior Intelligence Detection Based on Discrete Wavelet Transform and Support Vector Machine Algorithm <i>Xianglei Zhu, Shuai Zhao, Lu Zhang, Bolin Zhou, Yingbo Li, Jianye Hao,ying wu</i>	1042
280	Command current detection algorithm based on Kalman filter <i>Falei Li, Xingong Cheng ,Xiju Zong, Lisheng Li</i>	1048
282	3D Mechatronic Structures via Hybrid Additive Manufacturing Technology <i>Ji Li, Yang Wang, Gengzhao Xiang, Handa Liu, Jiangling He</i>	1054
283	Investigations on effects of the acquisition rate on the test accuracy of the data acquisition unit <i>Ding Ding, Yi Zhang, Yibo Zhao, Shanshan Zhang, Tianyun Du</i>	1059
284	Research on Solar Tracking Control System of the Space Station's Solar Alpha Rotary Joint <i>Zhen Zhao,Bi Wang, Guoping Chen</i>	1063
286	Reliability Analysis of Aero-Equipment Components Life Based on Normal Distribution Model <i>Yanming Yang, Feng Guo</i>	1070
287	Genetic Algorithm Optimization Of Convolutional Neural Network For Liver Cancer CT Image Classification <i>Ziqi Li, Huibin Ma, Diankui Li, Rui Fan</i>	1075
C359	Analysis of the MAP/M/1 Retrial Queueing Model with Markovian Flow of Breakdowns Repairable Server <i>Zhenchuan Zhou, Zonghao Zhou</i>	1082
D115	Research on Application of TDOA Wi-Fi Positioning Based on Adaptive Genetic Algorithm <i>Qian Peng, Jun Hu, Wang Xuehui, Yinggao Yue, Chen Ying, Shaotang Cai</i>	1086
D121	Connection Between Text-based Passwords and Topological Graphic Passwords <i>Bing Yao, Yarong MU, Hui SUN, Xiaohui ZHANG, Hongyu WANG, Jing SU</i>	1090
D122	Four-rotor UAV Virtual Simulation System for Agricultural Sowing <i>Yuchen Wang,Wenhui Zhang</i>	1097
D126	Transformer winding inter turn short circuit fault analysis and corrective measures <i>Like Dong, Tao Jin, Shaoping Guan, Zhihong Zheng, Chu Pei</i>	1102
D127	On Topological Graphic Passwords Made By Hanzi-graphs <i>Yarong MU, Bing YAO</i>	1106

D128	Adaptive Dual Threshold Based Moving Target Detection Algorithm <i>Ke Liang, Yongmei Jiang, Meng Long, Guangming Liang</i>	1111
D129	Study on the characteristics of self-coupling resonator ased on microring <i>Longxue Liang ,Xiaojin Zhang, Weiyi Qiang</i>	1116
D132	An Improved Centroid Localization Algorithm for WSN <i>Xiang Yang, Xuan Wang, Wei Wang</i>	1120
D136	Research and application of real-time control system for construction quality of digital dynamic compaction <i>Zilong Li, Lei Liu, Yichao Sun, Ruixin Ma, Guangshuang Ge</i>	1124
D142	Movie Retrieval Based on Shazam Algorithm <i>Xiaoxue Sun, Wenhui Zhang ,Deqin Chen</i>	1129
D143	Research on Accounting Method of Carbon Emission Reduction for Three-phase Load Balancing Project of Low-voltage Power Grid <i>Junxia Meng, Weimin Hao, Wei Xu, Mingzheng Wang ,Erxia Li</i>	1134
D144	A Comprehensive Evaluation System Urban Distribution Network <i>Junxia Meng, Wei Tang, Hongwei Tang, Wei Xu, Mingzheng Wang</i>	1139
D146	Vibration Modal Analysis of Parallelogram Linkage Palletizing Robot <i>Guangshuang Ge, Kai Yang, Ruixin Ma, Zilong Li</i>	1144
D149	Robotic Assembly Work Using Force Control <i>Zhang Jiabo, Dong Na, Ding Mingli</i>	1150
D153	The Analysis and Optimization of Urban Transit Network Based on Complex Networks <i>Dongyuan Li ,Zhengyuan Shi ,Dong Li ,Peixin Dong ,Jianping Xing</i>	1154
D156	Study on Location Parameter Adjusting System for Anchor Drilling in Coal Mine Roadways <i>Youzhen Zhang, Junjie Shao, Daoming Sun, Xutao Li, Ning Zhang</i>	1159
D157	CONSTRUCTING AUTOMATIC WRITING TEMPLATE LIBRARY OF NBA SPORTS NEWS <i>Jialai Tian, Xueqiang Lv</i>	1163
D158	Fuzzy Comprehensive Evaluation of Heavy Metal Pollution in Soil of the Daxia River Basin <i>Shengwei Wang, Feiyang Xue , ChangZhang, Tianlong Lou</i>	1167
D160	Distributed Wide-Area Back-Up Protection Configuration Scheme and the Method of Confirming Protection Domain <i>Yin Fengzhao, Cong Wei, Gai Wuyang, Sheng Yaru</i>	1171
D161	Research on Open-Circuit Fault Protection and Positioning Isolation of Constant Current Remote Supply System in Cabled Underwater Information Network <i>Zheng Zhang, Xuejun Zhou, Xichen Wang, Yankai Wang</i>	1177

D162	Analysis of Influence Degree of Hydrological Parameters for Wave Induction Electric Field <i>Pei Cui,Jun Shao, Shaojie Pang</i>	1182
D166	Design and Research of Intelligent Quantitative Investment Model Based on PLR-IRF and DRNN Algorithm <i>Chunming Tang ,Xinyue Zheng,Xiang Yu ,Chunkai Chen ,Wenyan Zhu</i>	1187
D167	Design Optimization of Thrust Density for Permanent Magnet Linear Motor Based on Genetic Algorithm <i>Xiang Wang ,Jun Wu ,Rudan Luo ,Jun Li</i>	1192
D168	On-line Statistical System Of Cut Tobaccoflow Based On Machine Vision <i>Wei Ying</i>	1199
D171	Voltage Sag Forming Method Considering Transient Process <i>Nan Wu, Jian Sun, Bing Chen, Xiaodong Yuan</i>	1204
D174	Study on the control method of medical rehabilitation robot <i>Xiaojie Zhao, Maoli Wang ,Zhenzhen Dong,Hao Wang</i>	1209
D178	Research and Application of Physical Unclonable Functions <i>Weiqing You, Xiaoming Chen, Hongyu Dong, Xinhai Tong, Shuang Qing</i>	1214
D179	Testability Modeling of Guided Projectile Based on Multi-Signal Flow Graphs <i>Ping Yan ,Feng Chen,Shiyan Sun,Xin Li</i>	1219
D184	Optimization and expansion Analysis of WDM Transmission Network <i>Haitao Chen, Youcheng Liang</i>	1226
D187	Skin Embryo Classification Model based on BP Neural Network optimized by Genetic Algorithm <i>XinGang Wang, TongYu Zhao</i>	1230
D192	Research Design of Adjustable Collimator for Irradiation Field <i>Ai Jun Cui, Zi Qiang Zeng, Li Feng Zhang, Bao Jie Liu, Guang Wen Han</i>	1238
D194	A Security Defense Scheme for Encryption and Network Isolation Gateway in Power System <i>Lin Fan, Jun Du, YanPeng Guo,Hui Wang</i>	1243
D195	GPU-based distortion correction for CMOS positioning camera using star point measurement <i>Fan Bu,Dalei Yao,Yuehong Qiu,Weicheng Cao,Li Wang</i>	1247
D200	Parametric Modeling of Geometric Errors for Machining Center Based on Legendre Polynomial <i>Jianfeng Lin,Weiqing Lin,Xuxu Zhang,Yanqiang Zhang,Jiqian Mi</i>	1252
D201	How to Evaluate the Performance of Military Air Traffic Control System in China <i>Jian Wan,Zhenghong Xia ,Xinping Zhu</i>	1257

D206	Thread Image Processing Technology Research Based on Combination of Edge Detection and Subpixel Positioning <i>Li Fang</i>	1262
D209	Application of Grid Spectrum Monitoring in Power Wireless Private Network <i>Jiming Yao,Lei Wei</i>	1267
D215	The Vehicle Trajectory Estimation Method Based on the Information Fusion <i>Gang Wang, Peter Han Joo Chong, Boon-Chong Seet</i>	1271
D216	Functional Design and System Development of Power Sales Management and Control Platform in Electric Power Market <i>Wu Wanlu ,Qin Lijuan ,Han Shuai ,Lin Xiqiao ,Zeng Bo</i>	1275
D217	Research on Comprehensive Evaluation of Electricity Selling Enterprises Based on Users' Maslow Demand Analysis <i>Qin Lijuan ,Han Shuai , Wu Wanlu ,Lin Xiqiao ,Zeng Bo</i>	1280
D218	Research on Fault Diagnosis for Power Transformer Based on HHGA-WNN <i>Hailiang Yang</i>	1285
D219	Study on Spectral Preprocessing and Wavelength Selection for Determining Kinematic Viscosity of Aviation Lubricating Oil By Infrared Spectroscopy <i>Yu Zhulin, Liu Jie,Zhao Bing</i>	1288
D221	Application of PLIF on Optical Display of Transverse Jet Flow Field under Supersonic Inflow <i>Qian Li, Lan Li, Diangkai Wang</i>	1292
D222	Inter-cluster multi-hop routing algorithm based on Kmeans <i>Xiang Yang,Tingpu Liu,Dengteng Deng</i>	1296
D224	Analysis of Complex Electromagnetic Environment Adaptability of Electronic Equipment <i>Xiang Chen,Chunqi Jiang ,Chao Wang,Dannong Li,Peng Dong</i>	1302
D225	Research on Manufacturing ProcessControl Based on Multi-Agent-System <i>Dongwang Li,Xuesong Jiang,Xiumei Wei</i>	1306
D226	The Design and Practice of the "Cloud Technology" Based Economic Management Experimental Teaching Platform <i>Fengyu Wang, Changyuan Xing, Xia Tang, Cheng Zhang</i>	1310
D227	Design of plant distance measuring device control system based on single chip microcomputer <i>Shuqiang Xu ,Shukun Cao ,Hao Shen,Xiangqian Xu ,Tao Han,Hejia Guo</i>	1317
D229	Signal statistical characteristics analysis and measurement of wireless channel during limited complex area <i>Guolong Shi, Yigang He, Yongbo Sui, Yuting Wu, Luqiang Shi</i>	1321
D232	Research of Network Intrusion Detection Based on DF-FSVM <i>Wang Chao, Li Qun,Wang XiaoHu,Ren TianYu,Dong JiaHan,Guo GuangXin,Shi EnJie</i>	1327

D236	An Antenna Design Scheme of Dual-transmitting Mode Based Projectile-carried Communication Jammer <i>Jie Zhang,Haijun Tao</i>	1332
D237	Calculation and Analysis of the Ridge Thickness of the CAM with Large Swing Angle and Multiple Arcs based on MATLAB <i>Zhenghao Ge,Xinqi Zou,Jiawei Li,Xiangzhen Xue</i>	1336
D238	An Adaptive Energy Saving Scheme of DTN based on Geographic Grid for Human Living Areas <i>Tingwei Fu, Zhan Wen, Jianwei Liu, Zheng Zheng, Wenzao Li</i>	1340
D239	Research on STATCOM DC side capacitor voltage stratified control strategy <i>Daoyuan Ma,Yanchao Ji , Jianze Wang</i>	1345
D240	Method containing reactive voltage control for 10KV distribution network with distributed power supply <i>Yang Yong, Zheng Jingjing, Liu Fuchao, Hua Xia, Peng Jing,Zhang Gang</i>	1353
D241	Android Malware Classification using XGBoost based on Images Patterns <i>Huajun Chen, Ranjin Du, Zhen Liu, Huan Xu</i>	1358
D242	Design and Simulation of Compliant Constant Force Hand Claw Based on Matlab <i>Zhenghao Ge, Demin Chai,Jiaojuan Shen, Xiaoqian Li</i>	1363
D244	Research on information system architecture of standardized organization based on data repository <i>Tianjing Wu,Rong Zhang ,Pan Dai,Shaohua Liu</i>	1367
D245	Beidou RNSS Timing Technology and Application in Smart Grid Lightning Locating System <i>ZHANG-Hao, YAO-Jiming,YANG-Hongzhen, HE-Chen</i>	1372
D246	Locating for Single-phase Ground Fault Based on the Analysis of Transient Recording Data <i>Zhang Beibei, Chen Lei,Shan Xin,Wang Bo, Wang Yuanyuan,Su Biaolong</i>	1378
D247	Research on Multi-thread Parallel Computing Fault-Tolerant Technology <i>Xu Xiao-dong</i>	1384
D248	Clustering Evaluation Methods based on Multiple Attribute Decision Making <i>Xuemei Li, Yushui Geng, Kun Yu, Mengjie Yang</i>	1388
D249	Research on submarine signal detection method based on Welch algorithm <i>Jing Yang,Naiping Chen ,Shuyan Ni</i>	1394
D250	Research on Fast Detection Method of Aircraft in Remote sensing image Based on Deep Learning <i>Yu Zhang,Xiangyu Liu ,Haitao Yang</i>	1398

D251	Analysis on the damage efficiency caused by image terminal guided rocket to fort targets <i>Shidong Fang , Dong Chen,Zhen Liu,Chunsheng Hu,Hanyu Ma</i>	1402
D252	Research on Monitoring System of Enterprise Energy Saving and Emission Reduction <i>Yang Yong, Zheng Jingjing, Liu Caixia, Zhang Gang</i>	1407
D253	Research on Load Characteristic Modeling and Optimization Control Method Based on Demand Response <i>Luo Fan, Peng Jing, Liang Fubo, Liu Fuchao, Hua Xia,Zhang Gang</i>	1412
D254	Dynamics Simulation and Design of Spiral Channel of Soot Purification <i>Kai Zhao,Mingming Xing ,Kaifeng Xue,Lili Zhou</i>	1417
D255	Research on Single-Phase Grid-Connected Inverter Based on PR Regulator <i>Qing Lan, Bin Li, Mengmei Jie</i>	1421
D256	Application and Experimental Research of Capsule Endoscope Based on Wireless Energy Supply <i>Kaifeng Xue, Zhonghua Sun, Mingming Xing</i>	1426
D257	Research on the three-dimensional terrain reconstruction system of Four-axis eight-rotor aircraft with binocular camera <i>Zengyuan Wang, Qiaoling Du</i>	1430
D258	The Parameter Estimation of Wideband LFM Signal Based on Down-chirp and Compressive Sensing <i>Yuliang Cong,Honglei Li,Jianwei Wang</i>	1436
D259	Structural Design and Kinematics Analysis of Compound-driven Pipeline Robot <i>Jun Chen, Xuxu Zhang</i>	1442
D260	Research and Application of Automatic Shaping and Processing Equipment for Distribution Lines <i>Wei Xu, Xiaodong Hu, Jinbao Si, Zhijiang Qu, Baozhong Ren, Zihao Wang, Pengcheng Ruan, Hui Qi</i>	1446
D261	A Parameter Optimization Design Method Based on LCC Resonant Converter <i>Dong Wang,Yingchuan Qi,Qiang Jia,Xin Liu,Yang Cheng,Genhua He</i>	1450
D262	An algorithm about spatial characteristic for non-reference video quality asesment based on visual characteristic <i>Chao Guo ,Yingyun Yang ,Yong Ma</i>	1455
D263	A Coding Identification Algorithm for code length and code rate of LDPC <i>Luo Luwei,Lei Yingke</i>	1460
D264	A Research of Power Analysis Based on Multiple Neural Network Structures <i>Biao Liu, Zhe Lu, Yuwei Huang, Meng Jiao, Rui Xue, Quanqi Li</i>	1464
D268	The Optimization of Interference in Multi-train Tracking Operation Based on CBTC <i>Xiaohan Liu, Yuezong Li</i>	1469

D269	A Method For Converting PLC Instruction List Into Ladder Diagram <i>Yongchao Zhao,Baozhong Ke</i>	1473
D271	Analysis of the Influence of Distributed Generation on Distribution Network <i>Senke Bai</i>	1477
D273	Behavior Level Modeling and EMC Analysis of Audio Communication System <i>CHEN Jiajia, QIAN Zhao jun</i>	1481
D274	Optimization Control of Industrial Boiler Furnace Combustion Based on Genetic Algorithm <i>Zaiying Wang, Yuting Yang</i>	1485
D275	Research on Design and Test Method of Bus Interconnection Technology in Spacecraft Data System <i>Feng Yang, Haiyan Sun, Yan Huang</i>	1490
D277	Research on Tracking and Tracing Bitcoin Fund Flows <i>Linxiang Cai ,Binjun Wang</i>	1495
D278	Based on Multiple Time Series Affinity Propagation Algorithm <i>Xiang Liu, Jingting Xu</i>	1500
D280	Troubleshooting and Modification of the class 1E Speed Sensor for Reactor Coolant Pump IN NPP <i>Peigen Cao ,Jian Chen,Bing You,Zhengyong Wang ,Renpeng Liu</i>	1504
D281	Design of a Vehicle Based Data Acquisition System for Inspecting Distribution Network <i>Peng Xiao, Haipeng Wang, Mengchao Fu, Rui Guo,Yong Sun</i>	1509
D283	Congestion Control Technology in Wireless Sensor Networks <i>Xin He ,Zengping Zhang</i>	1513
D285	Information Integration System for Microgrid based on the Electric Power Router <i>Jifan Lv, Liangfei Fang, Peng Guo, Chao Wang, Xiaoqiang Zhang, Chuangjun Zhao</i>	1528
D287	Indoor sleep monitoring based on single chip microcomputer <i>Yunsheng Xu, Qun Yin,Ji Gu,Rui Luo</i>	1533
D289	A Survey on Location Algorithm Based on Vector Magnetic Anomaly Signal <i>Yiqiu Tan,Jie Li,Danfeng Zhou,Mengxiao Song</i>	1538
D291	Structural Damage Detection Based on Statistical Process Control <i>Huan-yu Sun, Li-tao Zhang</i>	1545
D298	Enforcing security for real-time multicore embedded system <i>Xiaosheng Wang, Yanchun Yang, Yongfei Han</i>	1551

D299	Attribute Reduction of Hesitant Fuzzy Ordered Decision Table Based on Dominance Relation <i>Jing Tan ,Zi-chun Chen ,Xiao-qiang Zhu,Wei-dan Zeng</i>	1557
D300	Approach for GNSS Constellation Based on Artificial Bee Colony Algorithm <i>Lei Zhang,Faezeh JAMSHIDI,Fahimeh NEZHADALINAEI</i>	1562
D301	Automatic Positioning and Grinding Algorithm for Groove of Pipe Joint <i>Bojian Tang,Lianyu Zhao,Jutao Wang</i>	1567
D302	Research on Voltage Control Strategy in Distribution Network with Distributed Generation <i>Xiao Fu,Xiangyang zhao</i>	1571
D306	Research on Equipment Maintenance Time Management based on Risk Evaluation <i>Zhengkun Dai,Lu Yao ,Jiandong Qin</i>	1576
D307	Object Detection Based on Saliency and Sea-Sky Line for USV Vision <i>Junnan Shi,Jiucui Jin,Jie Zhang</i>	1581
D308	Design and Application of Traffic Administrative Law Enforcement Command and Dispatching System Base on Big Data <i>Luo Wanhua</i>	1587
D309	A New Automatic Color Equalization Algorithm Based on Lateral Inhibition Mechanism <i>Junming Su, Lilong Liu</i>	1592
D311	Research and application on the model of power parallel data integration <i>Yue Wei</i>	1596
D312	Research on 3D Electric Power Big Data Visualization <i>Yue Wei</i>	1601
D314	Research on Adaptive Parallel Topology Analysis Algorithm of Coalmine High-voltage Power Network based on First-come-first-serve <i>Wang XinLiang, Liu ZhiHuai, Fu MengMeng, Zhang BoQi, Wu Jun</i>	1606
D317	Study on A Kind of Warship Formation Underway Replenishment Scheduling Problem <i>Peng Dong, Chong Wu, Peng Yu, Hongyang Li</i>	1611
D318	Analysis of Outage Probabilities for Cooperative NOMA Users with Imperfect CSI <i>Xuesong Liang, Xinbao Gong, Yong peng Wu, Derrick Wing Kwan Ng ,Tao Hong</i>	1617
D319	Operation Optimization of Train Based on Firefly Algorithm <i>Aihong Zhu, Xiaona Ma, Yuqiong Duan, Jie Li, Jun Li</i>	1624
D321	A Novel Improved Ant Colony Algorithm for Multi-Robot Task Allocation <i>Xu Li, Zhengyan Liu, Yan Zhang</i>	1629

D323	Moth Flame Optimized Adaptive Fuzzy Refrigeration Control Algorithm and Modeing in Air Conditioning Control refrigerated System <i>Yi Zhong , YaZhou Xia , YuanLi Wang</i>	1634
D324	Effect of Gas on Sensitivity of Thermal Expansion Fluid Gyroscope <i>Yonghui Hu, Linhua Piao, Anrun Ren</i>	1640
D325	Study on Camera Calibration Error for Rail Profile Vision Measurement Based on Pin-plate Target <i>Yan Wang</i>	1644
D326	Study on deformation and dynamic clearance of the injection mechanism under temperature control <i>Dongdong You, Yunhao Wang, Zhujun Li, Fenglei Li</i>	1648
D327	Scheduling optimization of flexible flow shop <i>Xuefeng Liu ,Zhenhui Shen ,Lingmin Dai</i>	1652
D329	Design and Testing of a monitoring system for mushroom planting greenhouse <i>Man Zhou ,Yunbo Bie ,Qi Wang ,Zhiyong Zou</i>	1658
D330	Design of simple oscilloscope and spectrum analysis system <i>Zhiyong Zou ,JiaPing Wu ,Guoqing Yang ,YunBo bie , Ying Wang ,Man Zhou</i>	1662
D331	Design of Simplified Signal Generator and DC Power Integrated System <i>Zhiyong Zou ,Guoqing Yang ,Jiaping Wu ,Rui Wei ,Man Zhou</i>	1667
D332	Prediction of Short Term Electric Load Based on BP Neural Networks & ARIMA Combination <i>Zhiyong Zou ,Xiangwei Wu ,Zhengyang Zhao ,Qi Wang ,YunBo bie ,Man Zhou</i>	1671
D333	A Signal Denoising Method of Gesture Radar Based on Weighted Principal Component Analysis and Improved Wavelet Threshold <i>Wentai Lei , Qianying Tan , Feifei Hou, Zhilin Yang , Gengye Liu, Qingyuan Gu</i>	1675
D335	Dynamic Characteristics of Electromagnetic Damper under Impact Loading <i>Tong Huang ,Baoquan Guo,Tong Zhang,Chenglong Luan,Ning Ding</i>	1680
D336	Regional Power Load Forecasting Based on PSOSVM <i>Guoqiang Ji ,Shunxin Li ,Zhiping Shi ,Xinyan Zhang ,Weibo Zhao</i>	1685
D338	Height Analysis of Planar Shoe-wearing footprint of Young people based on Grav-scale centroid algorithm <i>Yong Luo,Mengna Yu</i>	1689
D340	Research on Modeling Method of Information Network Integrated Networking Based on 3D GIS <i>Kai Luo, Qiang Liu, Le-yu Zhai, Fei Xiao</i>	1694
D341	A Multidirectional Micro Jet Generator Driven by Piezoelectric Pump <i>Ran Piao, Linhua Piao, Anrun Ren, Yonghui Hu</i>	1698
D342	Research on Pendulum Characteristic of Natural Convection Gas within Three-dimensional Closed Cavity <i>Linhua Piao, Ran Piao, Anrun Ren, Yonghui Hu</i>	1703

D343	The Design and Numerical Simulation of Gyroscope Based on Multidirectional Jet Flow Generator <i>Anrun Ren, Linhua Piao, Ran Piao, Yonghui Hu</i>	1708
D348	Parameter Identification of Battery Model Based on Forgetting Factor Recursive Least Square Method <i>Shuang Kou, Xianwu Gong, Qingchuan Zhu, Guiping Wang</i>	1712
D350	Research on the Application of Node Location Technology in Wireless Ad hoc Networks on Amphibious Robots <i>Wenbo Zhou ,Quanyu Wang ,Uair Saeed</i>	1716
D351	Performance of Analysis of LoRa Signal in the Presence of LO Leakage <i>Sichao Li, Yubing Zhang, Jianwu Hu</i>	1721
D353	An efficient channel estimation algorithm for CO-OFDM system <i>Shuai Zhang, JinlongWang, Chenglin Bai, Yuexing Sun, Qin Li, Ning Fu</i>	1725
D354	Research on the Method of Constructing POI Data Model Based on AP-MRO <i>Lei Liu ,Jingwen Li, Suxian Ye</i>	1730
D355	Remote Sensing Image Target Recognition Based on Pruned Deep Neural Network Models <i>Daheng Cheng, Zhengwu Yuan, Yuanfeng Wu</i>	1734
D357	Research on smart factory model of color TV industry based on Intelligent Manufacturing <i>Qisheng Zhu ,Guangpeng Li ,Wei Wu</i>	1739
D358	Research on the application of RFID technology in color TV life cycle <i>Guangpeng Li, Qisheng Zhu , Wei Wu</i>	1743
D360	On Space Of Topological Graphic Passwords Based On Chinese Characters <i>Yarong MU, Bing YAO</i>	1747
D361	Wavelet Image Compression Algorithm Combined with Neural Network for Feature Points in the Visual Measurement Area <i>Zhijing Yu, Yongkui Tao , Jianwen Zheng , Jun Wu</i>	1752
D362	An Intelligent Calibration Method for Camera with Occlusion <i>Jun Wu ,Jianwen Zheng ,Yongkui Tao, Zhijing Yu</i>	1757
D363	Garbage Classification and Environmental Monitoring based on Internet of Things <i>Ben Wang ,WenliZhou, Shanhu Shen</i>	1762
D367	Research on Target Location Method of UAV based on Aided Beacon in Different Field of View <i>Shiyan Sun,Huimin Zhu ,Juncheng Chen</i>	1767
D368	Modeling, Control and Simulation of Underwater Kite <i>Liu Zhe, Zhao Yi, Zhou Yuerong, Guan Faming</i>	1775

D369	Supermarket security system based on STC89C52 , PLC and KingView <i>Jie Wu,Jianbo Zhang, Bohun Zeng,Lang Chen</i>	1781
D371	Research on Pedestrian Navigation Zero Velocity Correction Method Based on Multi-sensor <i>Xiaolei Wang, Shuangjian Yan, Donghao Li, Lingzhi Cao, Jitao Zhang, Qingfang Zhang, Xiaowan Zheng</i>	1786
D377	Product module partition method based on edge betweenness agglomeration characteristic of complex network <i>Bensheng Xu ,Yunze Yang ,Can wang,Fuyun Liu</i>	1791
D378	Underwater Topography Simulation based on Point Cloud from Multi-Beam Sonar <i>Gang Zhao,Yintao Shi,Maomei Wang,Yi Xu</i>	1795
D380	Research on Multi-object Job-shop Scheduling Strategy under Uncertain Environment <i>Xuesong Jiang,Shuaishuai Yao,Xiumei Wei, Zhipeng Li</i>	1799
D382	Parametric Modeling and Finite Element Analysis of the Camshaft Based on ANSYS APDL <i>Bin Zheng</i>	1805
D384	Gas monitoring system for power cable tunnel based on ZigBee <i>Yan Chen,Xin Li</i>	1809
D387	Analysis and simulation of DC transform circuit of isolation bridge <i>Xiaohan Ge</i>	1813
D389	Network-based control of discrete-time Systems with nonlinear perturbation and transmitting data constraint <i>Ying-Ying Liu, Yun-kai Chu</i>	1817
D390	Research on the Open Z-axis Fluidic Gyroscope based on MEMS <i>Linhua Piao,Ran Piao, Anrun Ren, Yonghui Hu</i>	1822
D391	Study on Sensitive Mechanism and Numerical Simulation of Fluid Gyroscope based on Thermal Expansion Flow Principle <i>Yonghui Hu, Linhua Piao, Anrun Ren</i>	1827
D392	IPv6-based Electric Vehicle power battery management platform <i>LI Zhong-zhen, GAO Chao-yue, JIN Dai-liang, ZHONG Wei, DAI Cheng-qin</i>	1832
D395	Channel estimation for MB-OFDM UWB based on pilot sequence channel shortening <i>Li Wen</i>	1837
D396	Decision of maintenance shop planning project based on TOPSIS <i>Hui Yan, Yingping Zheng, Hao Yan, Lifeng Zhang, Zhongqi Wang</i>	1841
D399	Subdivision path planning for robot polishing irregular surface <i>Miao Yu ,Xinxing Liu</i>	1845

D400	A Survey of UAV Visual Navigation Based on Monocular SLAM <i>Wenle Wei, Linin Tan, Guodong Jin, Libin Lu, Changjiang Sun</i>	1849
D401	Research on the Definition and Comparison of Satellite Equipments' Assembly MBD Model <i>Chunsheng Xu, Xiuhui Gao, Xinxiang Wang</i>	1854
D402	Improved dynamic load balancing algorithm based on Least-Connection Scheduling <i>Liangshuai Zhu, Jianming Cui, Gaofeng Xiong</i>	1858
D409	Research on Design and Installation Method of On-board Detection Equipment for Distribution Line <i>Shangwei Yang, Jianxiang Li, Mu Fang, Jinlong Zhao, Haipeng Wang</i>	1863
D411	Study of Upper-Limb Exoskeleton Control for Spacesuit <i>Pei Zhang, Rui Wang, Xin Liu, Qingqing Wei, Lei Zeng, Wei Wang</i>	1868
D412	Computer Electromagnetic Leakage Emission Automatic Test System—Based on CVI Platform Research and Design <i>Chunwei Miao, Hong Du</i>	1873
D413	The Design and Completion of No Resource Attitude Measurement Navigation System <i>FENG Junchao, ZHONG Mingfei, CHENG Long, TIAN Yingguo</i>	1878
D414	Comparative Experimental Study of Ground Reaction Force on Hemispherical Foot and Bionic Equinus of Quadruped Robot <i>Guowei Ma</i>	1883
D415	Process Analysis and Visual Interpretation Platform Design for Agile Satellite Dynamic Imaging <i>TAN Zhiyun, LUO Rongzheng, Li Jindong, LING Qiong, Liang Jian</i>	1887
D416	Attitude Control of Over-shoulder Launched Helicopter-borne Missile based on Control-saturation Sliding-mode <i>Haiqing Li, Gen Wang, Dong Cheng, Xiaoxia Liu, Xuhan Liu</i>	1892
D417	Mathematical Problems From Topological Graphic Passwords of Cryptography <i>Bing YAO, Yarong MU</i>	1897
D418	New Techniques For Topological Graphic Passwords Made By Chinese Characters <i>Yarong MU, Yirong SUN, Bing YAO</i>	1904
D420	Research on Mine Power System Leakage Criterion Based on Data Fusion <i>Xiucui Guo, Wenyin Zhu</i>	1908
D421	Research on Reliability Evaluation Algorithm based on Distribution Network containing Microgrid <i>Dengfeng Li, Xiaoju Li, Yuming Liu, Long Ran, Jiang Wan</i>	1915

D422	Design of Universal Equipment for Secondary Device in Smart Substation <i>Chao Li,Xiaoyu Bie ,Weiwei Ma,Wujie Chao ,Zhijun Tang ,Wenwang Hu</i>	1920
D424	Intelligent digital alarm clock <i>MeiSu Yin,Qun Yin, Ji Gu,Rui Luo</i>	1924
D427	Study on the Time Constant of DC Component and Its Influence on Short-circuit Breaking Capacity of Circuit Breaker <i>Yunxiao Bai,Shan Li ,Wentao Chen, Tianbo Wu, Libing Zhou</i>	1929
D430	Research on electric load simulator based on dual loop control <i>Yang Jia ,Yan Jie</i>	1933
D431	Research on Convergence and Control Technologies of IP Network and Optical Network <i>TAO Jing, LIU Chuan, YAO Jiming,BU Xiande, XU Xin</i>	1937
D435	Research on Airborne Data Bus Test Method <i>Jiaju Wu,Yang Wang,Yingyi Bao</i>	1942
D437	An Optimized Adhoc Network Routing Protocol For Multi-performance Decision Making <i>Guo Qi,Li Jie,Lu Ying</i>	1946
D438	Circular Trajectory Planning with Pose Control for Six-DOF Manipulator <i>Jincan Li, Mingyu Gao, Zhiwei He, Yuxiang Yang</i>	1950
D439	3D Digital Mockup for Honeycomb Sandwich Panels of Satellites <i>Liang Yan, He Xu, Yuhua Deng</i>	1956