Contents

1	Generalized Graph Regularized Non-negative Matrix Factorization for Data Representation Yang Hao, Congying Han, Guangqi Shao and Tiande Guo	1
2	Research on Conformal Phased Array Antenna Pattern Synthesis	13
3	Research on the Optimization of Wireless Sensor Network Localization Based on Real-time Estimation	23
4	Process Calculus for Cost Analysis of Process Creation Shin-ya Nishizaki, Mizuki Fujii and Ritsuya Ikeda	33
5	Parameter Estimation of LFM Signal by Direct and Spline Interpolation Based on FrFT	41
6	An Analysis Method for Network Status of Open-Pit WLAN Based on Latency Time	49
7	Multi-Source Scheme for Reprogramming in Wireless Sensor Networks	57
8	Study on Industrial Cluster Knowledge Emergence Model Based on Asymmetric Influence	67

x Contents

9	Study and Optimization of FIR Filters Based on FPGA Jinlong Wang, Lan Wang and Zhen Yuan	75
10	ES-VBF: An Energy Saving Routing Protocol	87
11	The Enhancements of UE Mobility State Estimation in the Het-net of the LTE-A System	99
12	Efficient Authentication Based on Orthogonality and Timeliness for Network Coding	107
13	Modeling of Foreign Objects Debris Detection Radar on Airport Runway	115
14	Min-Max Decoding for Non-Binary LDPC Codes Leilei Yang, Fei Liu and Haitao Li	125
15	A Security Attack Risk Assessment for Web Services Based on Data Schemas and Semantics	135
16	Analysis and Modeling of Heterogeneity from Google Cluster Traces	145
17	A String Approach for Updates in Order-Sensitive XML Data	153
18	Fault Diagnosis of Nodes in WSN Based on Particle Swarm Optimization	165
19	Beat Analysis Based on Autocorrelation Phase Matrix Yanzhu Gong, Bing Zhu, Hui Wang and Yutian Wang	173
20	Improved Serially Concatenated Overlapped Multiplexing System and Performance	183

Contents xi

21	Real-Time Face Recognition Based on Sparse Representation	191
22	Impact Analysis of Reducing Inbound Information Rate on the RDSS System Inbound Capacity	203
23	SNR Estimation Algorithm for Single Signal with Strong Multiple Access Interference	213
24	Use of Technology to Increase Functional Autonomy and Facilitate Communication for People with Disabilities: Design of an Emerging "Dis(ease)ability" Model	225
25	A Rectification Method for Removing Rolling Shutter Distortion	235
26	Design and Implementation of Electrolyzer Simulation System	247
27	Counter Based Energy Saving Scheme for Sleep Mode in IEEE802.16e	255
28	An Object Encapsulation Approach for P2P Resource Sharing Platform	265
29	A Method of Optical Ultra-Wide-Band Pulse Generation Based on XPM in a Dispersion Shifted Fiber Shilei Bai, Xin Chen, Xinqiao Chen and Xiaoxue Yang	275
30	Extraction of Acoustic Parameters for Objective Assessment of Nasal Resonance Disorder	285
31	Congestion Distance Based BitTorrent-Like P2P Traffic Optimization	295

xiv Contents

54	Tracking Threshold Analysis of a Kind of FLL Based on Kalman Filter	527
55	A Modified Cross-High-Order Spectral Estimation Approach Based on Rotational Invariance Technique in Hybrid Colored Noises	535
56	A Simplified DBF Channels Calibration Algorithm and Implementation	543
57	Parameter Estimation of Chirp Signals Based on FRFT Under the Low SNR	551
58	The Study on Frequency Agility in Radar Combining Pulse-to-pulse Frequency Agility and Doppler Processing Xie Feng, Liu Feng and Ye Xiaohui	559
59	An Improved Collision Avoidance Method for IEEE 802.11 DCF with Information-Sharing-List	567
60	The Evaluation System for Cloud Service Quality Based on SERVQUAL	577
61	The Design and Realization of a High Speed Satellite Network Management Agent	585
62	Simulation and Optimization of Via in Multi-layer PCB Jia Lu and Chunrong Zhang	593
63	On-Chip Bus Architecture Performance Estimation for a Microprocessor Based on Queuing Model	601
64	Study on Time Delay Estimation Algorithm in Cable Monitoring Based on Wavelet Theory	611

Contents xv

65	Design and Implementation of a Security System for Mobile Terminals' Digital Content	621
66	Kane's Approach to Modeling Underwater Snake-Like Robot	631
67	Temperature and Strain Characteristic Analysis of Fiber Bragg Grating Sensor	641
68	A Fuzzy Neartude Based Approach to Simulate the Two-Compartment Pharmacokinetic Model Lei Zhao, Xinling Shi, Yufeng Zhang and He Sun	649
69	A Three-Dimensional Role Based User Management Model in Web Information Systems	657
70	Key Management for Wireless Hierarchical Multicast Jingjing Zheng, Chunyu Zhao and Hongyun Wang	667
71	Novel Network Protocol for WSN Based on Energy and Distance	677
72	Strategies for Improving the Convergence Rate of High Accuracy Surface Modeling	685
73	Course-keeping Autopilot with RRD Based on GA-PD Adaptive Optimization	695
74	The Research of Soft Handover Signaling for LTE System in High-Speed Railway Environment	703
75	Track-Before-Detect Algorithm Based on Optimization Particle Filter Huajian Wang	717

76	End-to-End Delay Computation for Time Petri Nets Li Pan	727
77	Using the Reputation Score Management for Constructing FPFS System	737
78	Design and Simulation of AUV Visual Servo Charging Manipulator	745
79	Study on the Tracking and Parameter Estimating in Passive Magnetic Detection	755
80	Player Detection Algorithm Based on Color Segmentation and Improved CamShift Algorithm	765
81	Reputation Mechanism Model Research Based on the Trusted Third-Party Recommendation	773
82	Non Antagonistic Integrated Combat Network Modeling Yanbo Qi, Zhong Liu and Kun Sun	783
83	Study on Monitoring System for Pipeline Security Based on Multi-Sensor Data Fusion Technique	791
84	Virtualization Technology Based on the FT Platform Jing Wang, Qingbo WU, Yuejin Yan and Pan Dong	799
85	Design and Implementation of Light Sensor Node Based on ZigBee	809
86	Functional Safety Assessment for the Carborne ATP of Train Control System	817
87	Research of Personal Retrieval for Scientific Research Information Management System Hu Liang and Xie Suping	825

Contents xvii

88	On the Average Diameter of Directed Double-Loop Networks	831
89	A Real-Time SFM Method in Augmented Reality	841
90	Delay-Dependent Observers for a Class of Discrete-Time Uncertain Nonlinear Systems Dongmei Yan, Bing Kang, Ming Liu, Yan Sui and Xiaojun Zhang	849
91	Deconvolution Algorithm in the Retrieval of Raindrop Size Distribution from a VHF Profiling Radar Yukun Du, Zheng Run and Runsheng Ge	859
92	Fast Cross-Layer Congestion Control Algorithm Based on Compressed Sensing in Wireless Sensor Network	869
93	Design and Implementation of an Experiment Environment for Network Attacks and Defense	877
94	Study of Signal De-Noising in Wavelet Domain Based on a New Kind of Threshold Function	891
95	Maneuvering Target Tracking Based on Adaptive Square Root Cubature Kalman Filter Algorithm	901
96	A Novel Spatial Indexing Mechanism Leveraging Dynamic Quad-Tree Regional Division Jine Tang, Zhangbing Zhou, Ke Ning, Yunchuan Sun and Qun Wang	909
97	Feature Evaluation of Radar Emitter Signal Based on Logistic Regression Model	919

98	A Novel Algorithm of Modulation Classification and Carrier Frequency Estimation for MFSK	927
99	The Design and Analysis of Regional Positioning System Based on Zigbee Technology	937
100	A New Watermarking Algorithm for Geo-Spatial Data	945
101	An Investigation of Stationary Signal Blind Separation Using Adaptive Algorithms Xu Peng-fei and Jia Yin-jie	953
102	A Novel Algorithm for 2D-Radar and Infrared Sensor Track Association	961
103	Interference Management by Component Carrier Selection for Carrier Aggregation System in Heterogeneous Networks Changyin Sun, Lan Huang, Jing Jiang and Guangyue Lu	969