

Contents

Design of a Simulation System for Cross-Eye Dynamic Jamming	1
Zhang Yang, Shi Chuan and Dai Huanyao	
Design and Implementation of Real-Time Data Exchange Software of Maneuverable Command Automation System	13
Shi Chuan, Zhang Yang and Zhou Yuefei	
Active Fault Tolerant Control for Flexible Spacecraft with Sensor Faults Using Adaptive Integral Sliding Mode	23
Zhifeng Gao, Bing Han, Moshu Qian and Jing Zhao	
Method of Detection Optimization Based on Vector Electric Field Multi-electrode Gradient Information	31
Jianjun Liu, Chao Wu, Guoyu Cui, Zheng Wang, Yubo Wang, Guofeng Pan, Guohua Liu, Chengbo Hu, Yongling Lu and Xujie He	
Nonlinear Control Strategy of Split-Capacitor-Type Shunt Active Power Filter Based on EL Model	43
Yu Zhang, Qiming Cheng, Yinman Cheng, Fengren Tan, Jie Gao and Deqing Yu	
Evolution of Cooperation in Spatial Prisoner's Dilemma Game Based on Incremental Learning	53
Xiaowei Zhao, Zhenzhen Xu, Xu Han, Linlin Tian and Xiujuan Xu	
A Novel Continuous Feedback Control for Rapidly Exponentially Stabilisation of Mechanical Systems	61
Tian Shi and Zhongbo Sun	
Semantic Relation Driven SVM-Based Function Recognition for 3D Shape Components	71
Lingling Zi and Xin Cong	

Quantitative Analysis of Shear Mark Based on Maximum Lyapunov Exponent Algorithm	79
Bingcheng Wang and Chang Jing	
Design and Production of a 3D Printing Robot Hand with Three Underactuated Fingers	87
Licheng Wu, Tianyi Lan and Xiali Li	
The Simulation of a Linkage Underactuated Finger on Grasping Performance.	97
Licheng Wu, Tianyi Lan and Xiali Li	
EnhanceEigen: A New Comprehensive Trust Model for Peer-to-Peer Network	105
Xiali Li, Qiao Gao, Licheng Wu, Xun Sun and Songting Deng	
A Rubber Polymerization Conversion Soft Sensor Model Based on Improved ANFIS	115
Shi-wei Gao	
Initial Attitude Estimation and Installation Errors Calibration of the IMU for Plane by SINS/CNS Integration	123
Weiping Yuan, Mingzhen Gui and Xiaolin Ning	
An Improved Heuristic Algorithm for the Order Planning of Steelmaking Production	131
Liangliang Sun, Sisi Li, Yuanwei Qi and Tianmu Ma	
Adaptive Fuzzy Dynamic Surface Control for AUVs via Backstepping	143
Shijun Wang, Haisheng Yu, Lin Zhao, Yumei Ma and Jinpeng Yu	
Self-organized Task Allocation in a Swarm of E-puck Robots	153
Qiaoyu Li, Xiaolong Yang, Yuying Zhu and Jianlei Zhang	
A New Circuit Design for Chaotic Oscillator	161
Wenjing Hu	
Manifold Regularized Discriminative Canonical Correlation Analysis for Semi-supervised Data.	169
Hao Wu and Xudong Zhou	
Robust Dual Stage Control for Inertially Stabilized Platform	177
Jiangpeng Song, Di Zhou, Guangli Sun and Chunling Li	
Directed Graph-Based Adaptive Attitude Cooperative Control for Fractionated Spacecraft	185
Zhaoming Li and Jiejuan Wang	

Research on Sensorless Control of PMSM Based on a Novel Sliding Mode Observer 193
 Xiaqing Zhu

Ship Three-Axis Turntable Control Based on Fuzzy Inference Variable Universe 201
 Huixuan Fu, Yuan Li, Zhongliang Zhang and Yuchao Wang

A Method of Fault Diagnosis Based on DE-DBN 209
 Yajun Wang, Jia Zhang and Fang Deng

Detection of High Throughput Droplet in Microfluidic System 219
 Yiming Yao, Minkai Li and Xiaojuan Chen

Dynamics Control and Simulation of Two DOF Robot 227
 Yanping Yang, Haisheng Yu, Songfeng Pan and Zhencheng Zhou

Dynamic Decision Based Noncyclic Scheduling of Multi-cluster Tools 237
 Yuanyuan Yan, Huangang Wang and Wenhui Fan

Pattern Recognition of Artificial Legs Based on WPT and LVQ 247
 Lei Liu, Yinmao Song, Peng Yang and Zuo Jun Liu

The Survey of Methods and Algorithms for Computer Game Go 255
 Xiali Li, Xun Sun, Licheng Wu, Songting Deng and Qiao Gao

On-line Monitoring of Batch Processes Using Additive Kernel Partial Least Square 263
 Ziang Ma, Huangang Wang and Junwu Zhou

Research for Path Planning in Indoor Environment Based Improved Artificial Potential Field Method 273
 Hu Pan, Chen Guo and Zhaodong Wang

Active Learning Based Support Vector Data Description for Large Data Set Novelty Detection 283
 Lili Yin, Huangang Wang, Wenhui Fan and Qingkai Wang

Modeling and Analysis of the Driving Range for Electric Passenger Vehicles Based on Robust Regression Analysis 295
 Ting Zhang, Jun Bi, Pan Wang and Longhui Li

Variable Pitch Fault Prediction of Wind Power System Based on LS-SVM of Parameter Optimization 303
 Tao Liang and Yingjuan Zhang

Observability and Controllability Preservation for Multi-agent Systems with Time Delay and Time-Varying Topology 313
 Xiangju Jiang, Zhijian Ji, Ting Hou and Fanggang Sun

A Classified Access Control Model Research for Cloud Computing	327
Wenyi Shen, Linbo Tao, Bo Liu and Yishen Wang	
Finite-Time Sliding Mode Control for Fractional-Order Gyroscope Systems with Unknown Parameters and Nonlinear Inputs	335
Xiaomin Tian and Zhong Yang	
Tracking Accuracy Research on FLL-Assisted PLL in Ultra-tightly Integrated Navigation System	347
Shenglan Wang and Yandong Wang	
Feature-Based Monocular Real-Time Localization for UAVs in Indoor Environment.	357
Yu Zhang, Zhihao Cai, Jiang Zhao, Zhenxing You and Yingxun Wang	
Scene Parsing with Deep Features and Per-Exemplar Detectors.	367
Xiaofei Cui, Hanbing Qu, Xi Chen, Ziliang Qi and Liang Dong	
Design of a Temperature and Humidity Monitoring System for Plant Growth Cabinets Based on Data Fusion	377
Shigang Cui, Kun Liu, Xingli Wu, Yongli Zhang and Lin He	
Consensus of Heterogeneous Multi-agent Systems Based on Event-Triggered.	385
Zhiqiang Yan and Ronghao Wang	
Lifetime Maximization Strategy for Wireless Sensor Network Using Cluster-Based Method	395
Xiaoping Ma, Honghui Dong, Limin Jia and Ruhao Zhao	
Reliable Static Output Feedback Guaranteed Cost Control for Uncertain Systems with Time-Delay	407
Shuangquan Zou, Hao Yan and Lin Zhang	
An Iterative Camera Pose Estimation Algorithm Based on EPnP.	415
Peng Chen	
The Research on the Dynamic Performance Test Method Based on SPHS	423
Jun Xiao Li, Xue Mei Wang, Zhe Xu and Tong Wu	
A New Tuning Approach to Second-Order Active Disturbance Rejection Control	433
Xudong Shen, Wei Wei, Yanjie Shao and Min Zuo	
RBF-ADRC Based Intelligent Course Control for a Twin Podded Ship	441
Zaiji Piao and Chen Guo	

Human Action Recognition with Skeleton Data Using Extreme Learning Machine 449
 Ying Li, Xiong Luo, Weiping Wang and Wenbing Zhao

An Adaptive Dynamic Programming Control Scheme Using Tunable Radial Basis Function 457
 Jianzhong Bi, Xiong Luo and Weiping Wang

Efficient Hidden Danger Prediction for Safety Supervision System: An Advanced Neural Network Learning Method 465
 Zhigang Zhao, Yongfeng Wei, Xinyan Wang, Ruixin Li and Jing Deng

A Domain Ontology Construction Method with Ontology Modification Effort Assessment 473
 Yuehua Yang, Yuan Ping, Junping Du and Hui Ma

Adaptive Generalized Function Projective Synchronization of Colored Networks in Finite Time 481
 Guoliang Cai, Wenjun Shi, Yuxiu Li, Zhiyin Zhang and Gaihong Feng

The Comparative Study of Mars Entry Phase’s Guidance Methods 491
 Maomao Li and Jun Hu

Feature Level Information Fusion Based Deep Learning 501
 Kejun Wang, Xuesen Hao and Xianglei Xing

Study on Optimal Setting of Decomposing Furnace Temperature Based on Soft Measurement 513
 Hong Liang Yu, Guo Dong Lian and Xiao Hong Wang

Safe Diagnosis of Stochastic Discrete Event Systems by Constructing Safe Verifier 523
 Fuchun Liu and Pengbiao Yang

An Example for Extension Strategy of Tourism Industry Integration in Guizhou Province 531
 Qiaoxing Li and Hongyan Zhao

An Evolutionary Algorithm for Optimal Tracking Gate Based on Hybrid Encoding 539
 Han Zhao, Cheng Zhang and Jiajun Lin

Study on Extension Design of Business Model 549
 Qiaoxing Li and Tunhua Jiang

Adaptive Sliding Mode Control for an Active Gravity Offload System 561
 Jiao Jia, Yingmin Jia and Shihao Sun

Four Quadrant Operation and Regenerative Braking Control of PMSM Drive Systems.	571
Xinxin Cheng, Haisheng Yu and Jinpeng Yu	
CMAC and NISM Integrated Controller for Twin-Rudder Twin-Propeller Ship Course Tracking.	581
Hongxin Wu, Chen Guo and Yingkai Lou	
A Method for Topic Classification of Web Pages Using LDA-SVM Model.	589
Yuliang Wei, Wei Wang, Bailing Wang, Bo Yang and Yang Liu	
Adaptive Robust Control for a Class of Singular Systems with Actuator Saturation	597
Zhuang Cai, Hai-tao Song and Qi Tian	
Trajectory Tracking Control for Omnidirectional Mobile Robots with Full-State Constraints.	605
Wenhao Zheng and Yingmin Jia	
An Improved Extreme Learning Machine Model and State-of-Charge Estimation of Single Flow Zinc-Nickle Battery	613
Xiaofeng Lin, Yang Guo, Jie Cheng, Zhenbang Guo and Xinglong Yan	
A Unified Framework for Age Invariant Face Recognition and Age Estimation.	623
Changhong Wu and Jianbo Su	
Optical Flow Based Obstacle Avoidance and Path Planning for Quadrotor Flight.	631
Huiqi Miao and Yan Wang	
Opinion Leader Mining of Social Network Combined with Hierarchical Sentiment Analysis	639
Hang Ye and Junping Du	
Cloud Model Based Intelligent Control for Marine Hydraulic Steering Gear System	647
Yongfeng Huang, Chen Guo, Jianbo Sun and Yutong Huo	
Tourism Information Search Based on Dynamic Attraction Topic Distribution	655
Lingfei Ye, Junping Du and Zijian Lin	
Motion Transition Based on Bézier Quaternion Curve	663
Yancai Lu and Shuling Dai	
RBF Based Integrated ADRC Controller for a Ship Dynamic Positioning System	673
Fangfang Yang, Chen Guo and Yunbiao Jiang	

Research of Localization Method Based on Virtual Reference Points in Robot Auditory System 681
 Shuopeng Wang, Peng Yang, Hao Sun, Jing Xu and Xiaomeng Zhang

Vehicle Tracking Based on Structured Output SVM Using Retinex and Mutual Information 689
 Longqi Wang, Xinyang Li, Guanyu Lin, Wei Pei and Guanrong Wang

Neural Network-Based Self-triggered Attitude Control of a Rigid Spacecraft 697
 Shuai Sun, Mengfei Yang and Lei Wang

Target Locating and Tracking Based on the Azimuth and the Change Rate of Doppler Frequency 709
 Qingshan Fu, Shuaihu Tian and Xiaoyan Mao

The Embedded Implementation of Millimeter Wave Radar Signal Processing System 721
 Kingbo Ren, Zhiyuan Liu and Tengfei Fu

Monitoring System Design and Realization for Unmanned Mobile Robot Based on Web 731
 Yuchao Wang, Tianlong Huang, Guang Zou and Huixuan Fu

Visual-Inertial Tightly Coupled Fusion and Nonlinear Optimization for UAVs Navigation 741
 Zhenxing You, Zhihao Cai, Jiang Zhao, Yu Zhang and Yingxun Wang

Model and Attitude Control of a Miniature Hybrid Autogyro 751
 Ziwei Song, Zhihao Cai, Kunpeng Li, Jiang Zhao and Ningjun Liu

Receding Horizon Control for Lateral Collision Avoidance of Intelligent Vehicles 761
 Siyu Lin, Zhiyuan Liu and Songyan Wang

Research on Cross Platform Model Display Technology of BIM 773
 Junjie Huang, Jia Wang and Xiaoping Zhou

Hand Detection from Cluttered Images Based on a Hierarchical Strategy 783
 Jing Qi, Kun Xu and Xilun Ding



<http://www.springer.com/978-981-10-6444-9>

Proceedings of 2017 Chinese Intelligent Automation
Conference

Deng, Z. (Ed.)

2018, XI, 791 p. 372 illus., Hardcover

ISBN: 978-981-10-6444-9