

2018 5th International Conference on Information, Cybernetics, and Computational Social Systems (ICCSS 2018)

**Hangzhou, China
16-19 August 2018**



**IEEE Catalog Number: CFP1888X-POD
ISBN: 978-1-5386-7089-7**

**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:	CFP1888X-POD
ISBN (Print-On-Demand):	978-1-5386-7089-7
ISBN (Online):	978-1-5386-7088-0
ISSN:	2639-4227

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

Friday, August 17, 2018

Session FrO: 14:00-17:30 **Address: Petroleum Hotel 64 JingyeBeili, Jinzhou, China.**

Session FrO I-A: 14:00-15:30

Adaptive consensus tracking control for multi-agent systems with network communication failures

Jun Wei Zhu, XinWang, Wen An and Li Yu.....1

Pedestrian tracking based on HSV color features and reconstruction by contributions

Qiuping Jiang, Mengfei Liu, Xiaoyan Fu, Yuanyuan Shang and Hui Ding.....7

High-Precision Tracking of Piezoelectric Actuator Using Active Disturbance Rejection Control

Da Min, Deqing Huang and Yupei Jian13

Attitude tracking for a quadrotor UAV based on fuzzy PID controller

Tianpeng Huang, Deqing Huang and Dan Luo.....19

Pattern Classification of Motor Imagery EEG-NIRS Based on SVM with Artificial Fish Swarm Algorithm

Chuyang Miao, Yuliang Ma, Wei Wu, Qizhong Zhang and Yunyuan Gao.....25

Flying Inverted Pendulum

Dacheng Tang.....30

Session FrO II-A: 14:00-15:30

Global exponential stability and stabilizing for neural networks with time-varying delays and impulses

Yingxin Guo, Fei Wang and Luyao Xi35

Stability analysis of systems with time-varying delays using Bessel-Legendre inequalities

Xiao-Gui Liu, HongBing Zeng, Wei Wang and Gang Chen.....	38
Mean square asymptotic stability for stochastic genetic regulatory networks with interval time-varying delays, Xinyue Zhang and Yantao Wang.....	44
Adaptive Pitch-axis Control for an AUV Based on Characteristic Modeling Method Hui Ye, Qingjun Zeng and Qingxian Wu.....	50
Robust Tracking Control for Small Unmanned Helicopter Wenhui Chen, Qingxian Wu, Kun Yan and Kun Hu.....	55
Intelligent Optimal Control for Wastewater Treatment Process with Flexible Objective Functions LiangLiang Zhang, Hong Gui Han, Lu Zhang and Jun-Fei Qiao.....	61
Session FrO III-A: 14:00-15:30	
Image encryption based on fully phase encoding and pixel scrambling in gyrator transform domain Junxin Chen, Jiazhu Xing, Lin Qi and Chong Fu	67
Adaptive Fuzzy Fault Accommodation of Uncertain Complex Dynamical Networks with Nonlinear Couplings Xiaojian Li, Shaokun Liu and Xiang Xiao.....	73
An Improved Calculation Method for Short Circuit Current of Marine Power System Haoliang Wang, Dan Wang, Zhouhua Peng and Tianlin Wang.....	79
Stabilization of systems under stochastic clock offsets Haoyuan Sun, Jie Chen and Jian Sun.....	84
Hand-Interactive Behavior Analysis for User Authentication Systems with Wrist-Worn Devices Chao Shen, Qi Lv, Zhao Wang, Yufei Chen and Xiaohong Guan.....	90
Event-Triggered Sliding Mode Control of Discrete-time Markov Jump Systems with Partly Unknown Transition Probabilities	

Wenshuai Lin, Deyin Yao,Xiaobin Gao and Qi Zhou.....	96
--	----

Session FrO I-B: 16:00-17:30

Matched Filtering and Orthogonal Matchinng Pursuit for Terahertz Coded-aperture Imaging	
---	--

Shuo Chen, Chenggao Luo, Hongqiang Wang, Bin Deng and Yuliang Qin.....	102
--	-----

Distributed Consensus Control for Second-order Stochastic Nonlinear Multi-agent Systems Using Command Filter Backstepping	
---	--

Guozeng Cuii, Jinpeng Yu and Gongfei Song.....	105
--	-----

Reliable H^∞ Filtering for Discrete-time Takagi-Sugeno Fuzzy Markov Jump Systems	
---	--

Yangyang Qian and Mingang Hua.....	111
------------------------------------	-----

Hyperspectral image classification based on convolutional neural network	
--	--

Ma Chao and Guo Meng-yuan.....	117
--------------------------------	-----

Synchronization tracking of heterogeneous robotic systems with parametric uncertainties and communication delays	
--	--

Xiang-Yu Yao, Ming-Feng Ge, Hua-Feng Ding, Leimin Wang, Jie Liu, Tao Han and Zhi-Wei Liu.....	122
---	-----

Adaptive Tracking Control for Robotic Manipulators with Time-Varying State Constraints	
--	--

Shiyi Zhao, Peihao Du, Hongjing Liang and Liang Cao.....	128
--	-----

The simulation and synchronous control of the hyperchaotic Couette-Taylor flow system	
---	--

Wang Quanyu, Li Yuanxin and Li Kuo.....	134
---	-----

Session FrO II-B: 16:00-17:30

A Model-free Design for Tracking Control of Nonholonomic Mobile Robots under Polar Coordinates	
--	--

Qi-Ying Feng, Lei Chen, Xiaojun Zhu,Shen Xu, Hui Chen and Hua Chen.....	139
---	-----

Robust optimal design of oscillatory genetic networks using a novel VonPSO algorithm	
--	--

Wei Zhang, Qinqin Yao, Jianming Zhang and Ning Wang.....	143
Sliding Mode Observer Based Adaptive Backstepping Control for A Multi-vectored Propeller Airship	
Yubin Wen, Weixiang Zhou, Yueying Wang, Huaicheng Yan, Kuankuan Liang and Dengping Duan.....	150
A Sustainable Reward Mechanism for Block Mining in PoW-based Blockchain	
Feilong Lin, Zhonglong Zheng, Zhiliang Huang, Changbing Tang, Hao Peng and Zhongyu Chen.....	156
Approximation-based asymptotical tracking control of nonlinear systems quantized actuator	
Huanqing Wange.....	162
Big-Data Analysis of Multi-Source Logs for Network Anomaly Detection	
Wang He.....	168
Session FrO III-B: 16:00-17:30	
Stacking Objects Picking System Based on Structured Light	
Dong Li, Shan Liu, Xinwei Jiang and Gui Chen.....	174
Research on Interaction Safety of Human-robot Collision Based on Series Elastic Actuator	
Pengcheng Wang, Qiuguo Zhu, Xiehe Hu, Jun Wu and Rong Xiong.....	180
Further Improved Wirtinger inequalities approach to stability of systems with time-varying delays	
Hui-min Cai, De-ren Gong, Hai-sheng Tian and Deng-ping Duan.....	186
Ensemble based Quantification for 18O Labeled LC-MS	
Tianjun LI,Long CHEN and Yin-Ping ZHAO.....	194
Memristive neural network based reinforcement learning with reward shaping for path finding	
Wenbo Song, Yue Zhou, Xiaofang Hu, Shukai Duan and Hong Lai.....	200
Fixed-time consensus for multi-agent systems with impulsive effect	

Zhengran Cao, Chuandong Li, Hongfei Li and Caiping Chen.....	206
--	-----

Saturday, August 18, 2018

Session SaO: 9:00-12:20 **Address: Petroleum Hotel 64 JingyeBeili, Jinzhou, China.**

Session SaO IV-A: 9:00-10:30

RBF Neural Network Adaptive PID Control for Energy Storage System in Grid-Connected Photovoltaic Microgrid

Yuchen Dai, Chengshun Yang, Xiaoning Huang and Dezhi Xu.....212

Recovering the Controllability of the Temporal Networks

Jin Ding, Ping Tan, Yong Ning.....218

Enhanced quantum neural network integrated in health state estimation for aircraft fuel system

Zehai Gao, Cunbao Ma, Xu Dong.....225

An amplitudes-perturbation data augmentation method in convolutional neural networks for EEG decoding

Xian-Rui Zhang, Meng-Ying Lei and Yang Li.....231

On Learning Law Design of Fuzzy Hopfield Neural Networks with Time-Varying Delay

Shanen Yu, Xia Liu, Jianjun Bai, Renquan Lu and Anke Xue.....236

SAE network: a deep learning method for traffic flow prediction

Yinli Jin, Wanrong Xu, Ping Wang and Li Li.....241

Leader-following Consensus of Nonlinear Multi-Agent Systems using Observer-based Event-triggered Control

Jiahuan Lu and Lin Li.....247

Session SaO V-A: 9:00-10:30

Exponential Synchronization of Chaotic Lur' e Systems Via Event-Triggered Control

Lin-xing Xu and Hong-Jun Ma.....253

An effective two-stage feature selection method with parameters optimized by simulated annealing algorithm Zhe Yang and Jia Ren.....	258
Novel delay-dependent H_∞ synchronization of chaotic Lur' e systems with time-varying delays based on sampled-data control Chao Ge, Bingfang Wang, Yue Ge, Lei Wang, Te Meng, Ying Wang.....	264
Multi-motor synchronous servo system control based on improved inertia identification Yan Guan, Yifei Wu, Yi Gao and Xiaozhuang Liu.....	270
Constructions of Strict Lyapunov Functions for Homogeneous Time-Varying Systems with Applications in Multi-Agent Systems Bin Zhang.....	275
Quadrotor QFT control based on model reduction method Kun Hu, Qingxian Wu, Yikun Li and Wenhui Chen.....	281
Session SaO VI-A: 9:00-10:30	
Guaranteed Cost Control of Discrete-time Systems with Saturation Nonlinearities Qingxiang Feng, Liuhai Wang and Mingqing Xiao.....	287
Uncertainty Considered Automatic Voltage Regulator of Synchronous Generator Cheng Zhong, Huan Zhang, Yong Liu, Tao Wang, Xiao-ming Li, Xiao-ming Li, Xiu-yu Zhang, and Guo-qiang Zhu.....	293
Dissipative Filtering of Singular Interval Type-2 Fuzzy Systems Jiangrong Li, Huayang Zhang, Zhiguang Feng, Juan Shi and Liang Zhang.....	299
An efficient and robust spectral clustering approach for subspace classification Sihui Liu, Zhigang Ren, Zongze Wu and Shengli Xie.....	305
Parameter Identification Method for Quad-rotor UAV Based on the Lyapunov-MARI Algorithm Cheng Wang, JianXiang Xi, Jie Yang and Hui Yao.....	311

Ship Course Keeping Controller Design with General Noise Yuming Bai, Jingyu Yan and Qihe Shan.....	317
 Session SaO IV-B: 10:50-12:20	
Investigation of state convergence issues on uncertain perturbed nonlinear T-S fuzzy system Hao Chen.....	322
 Fuzzy control of damping force in the air suspension system Qianying Xia, Rui Bai and Hebinline Wang.....	328
 Fuzzy Sliding Mode Control for Permanent Magnet Synchronous Motors Chunyu Yang, Leping Shen and Linna Zhou.....	331
 Type-2 Fuzzy Forecasting of Main Road Traffic Flow Feng Zhang, Hong Mo, Kefu Yan and Jun Li.....	337
 Recursive Sliding Mode Based Iterative Learning Control Qiuzhen Yan, Jianping Cai, Youfang Yu and Yan Ma.....	343
 Fuzzy controller design for vehicle active suspensions based on genetic algorithm Lei Cheng, Wenping Xue,Guohai Liu and Kangji Li.....	348
 Session SaO V-B: 10:50-12:20	
Item Recommendation via Latent Topic Tag Ren-de LI, Qiang GUO, Qiang YUE and Jian-guo LIU.....	353
 Application of Electrical Capacitance Tomography in Pneumatic Conveying of Pulverized Coal Yanli Gao, Shiming Chen and Qing Xu.....	359
 Analysis of Transient Voltage Stability of Wind Power Accessing Jiangxi Power Grid Yanli Gao, Baoxiang Gao and Shiming Chen.....	364
 Adaptive Fast Nonsingular Terminal Sliding Mode Control for Near Space Vehicle Cui Wang and Qiang Zhang.....	370

Long-term forecasting of time series based on sliding window information granules and fuzzy inference system

Wei zhou, Degang Wang, Hongxing Li and Wenyan Song.....375

Containment Control for Fuzzy Multi-agent Systems Subject to Stochastic Controller Gain Variation

Zhenhua Xu, Bingtong Xiang, Hongjie Ni and Dan Zhang.....381

Session SaO VI-B: 10:50-12:20

Stabilizing Switching Control for DC-DC converter in Two-stage Photovoltaic Grid Connected Inverters

Yuwen Liu, Tao Wang, Xijun Wang and Weiming Xiang.....387

Fault Diagnosis of High-speed Railway Bogies Based on LSTM

Yang Yang, Na Qin, Deqing Huang and Yuanzhe Fu.....393

Reliable Model Predictive Control for Linear Sampled-Data System with Input Constraints

Ting-ting Tang, Ting Shi and Chun Zhang.....399

Study on Fault Diagnosis Method of Emulsifier Based on Empirical Wavelet Transform and SVM

Yuesheng Wang and Changlong Fan.....404

Convolutional Neural Network Based Expression Classification with Face Alignment

Ziyang Han, He Huang and Jianlin Wang.....408

Research on torque ripple and its minimization method of switched reluctance motor

Ningli Wang and Hao Feng.....413

Session SaP: 10:50-12:20

New result on finite-time boundedness analysis for switched linear time-delay systems

Zheng Liu, Chaoxu Guan, Liu Yang and Zhongyang Fei.....418

Research Status of Robot Calibration Technology

Qixin Zhu and Yiyi Yin.....	424
The design of PID controller based on improved bird swarm algorithm	
Dewen Qiao, Nankun Mu, Xiaofeng Liao, Huiwei Wang and Fan Yang.....	429
Adaptive Neural Tracking Control of Stochastic Nonlinear Switched Systems with Input Saturation	
Ying Bi and Ben Niu.....	435
Adaptive Critic Optimal Fuzzy Control for Quarter-car Suspension Systems	
Tiechao Wang and Gang Li.....	440
Fixed-time Formation-containment Control for Multi-agent Systems	
Tong Yuan and Yang Liu.....	445
Improved Distributed Cooperative Filters for Minimum-Variance Unbiased Estimation of Unknown Inputs and States in Multi-Agent Systems	
YuKun Shi, ChangQing Liu and YouQing Wang.....	452
Indoor localization for mobile robots using odometry and vision system: a pseudo measurement Approach	
Wenling Li, Wenhao Zheng, Yang Liu.....	457
Low-complexity adaptive control for unknown pure feedback nonlinear systems	
Longsheng Chen and Qi Wang.....	463
High-Precision PMU Testing Device based on Synchronous Clock Source	
Ru Xiong, Maolin Pei, Weizhe Zhao, Liangliang Chen, Haimei Hu, Aichao Yang, Hongchun Cao, Zhiling Xiong and Yajun Fan.....	468
Robust laser radar-based robot localization using UFIR filtering	
Ning FENG, Yong ZHANG, Yuan XU and Yueyang LI.....	473
Power Optimization Based on Successive Convex Approximation in Smart Grid Communications	
Kai Ma, Pei Liu, Jiabin Li, Congshan Wang and Yangqing Yu.....	478

Recognition and Grasping of Target Position and Pose of Manipulator Based on Vision	
Dong Wang, Wei Jia, Yang Yu and Wei Wang.....	483
Analyzing Jobs-housing Spatial Relationship Based On Floating Car Data	
Shiwei Shao, Lin Lu, Hui Liu and Lixia Xiao.....	489
A Data-driven Model of Optimal Iterative Learning Control for Distributed Parameter Systems	
Lanlan Liu, Xisheng Dai, Weijie Zhan and Fan Zhang.....	495
Maritime Traffic Safety Assessment in Restricted Visibility	
Houxing Dai and Zhaolin Wu.....	499

.