

目 次

安全控制理论与应用专题

基于故障风险学习的无人机安全控制方法 1029
卞俊, 章健淳, 杨彬, 郭克信, 张剑锋, 余翔, 郭雷

基于控制障碍函数的自适应动态规划方法及其在安全关键控制中的应用 1043
李咸宁, 王烨宾, 姜钟平

欺骗攻击下互联多智能体系统的分布式可调输入——状态安全攸关控制 1055
黄晓敏, 龙离军, 刘士新, 洪奕光

信号时序逻辑语义驱动的非线性系统安全控制 1073
柯唯翎, 赵欣悦, 陈仲瑶, 方浩, 张心骛

DoS 攻击下具有状态约束的非线性系统网络安全控制 1089
宋若琳, 洪奕光, 董怡, 辛斌, 王晴, 陈曦

具有异常连边的复杂网络拓扑结构辨识方法 1101
郑尧中, 张海涛, 胡源园

论文

高精度边界驱动与图像内容自适应的超像素分割方法 1110
许云扬, 韩天骄, 李璇, 张彩明, 李雪梅

基于信息瓶颈解耦表征的对比多视图聚类方法 1135
韩禄伟, 王涌超, 毕秀丽, 马建峰, 高新波, 肖斌

一般约束满足问题解的采样洛瓦兹局部引理 1154
何昆, 王淳扬, 尹一通

极小—极大(k,z)-聚类问题的参数化近似 1195
张震, 袁依格, 武迪, 田志平, 冯启龙

SUNET: 云网端协同安全范式下的新型网络 1206
王亮, 王良民

基于模型缩减的输入时滞系统数据驱动控制 1228
孟媛, 张颖, 戚文念, 张杰

三维空间中带有柔性结构的航天器跟踪控制 1244
武晓辉, 王军民, 刘向东

基于分布式经济模型预测控制的交直流混合微电网功率协调控制策略 1261
赵少文, 张怡, 刘向杰

基于 Stackelberg 博弈的敌对目标袭扰下无人船轨迹跟踪控制与避障 1279
文利燕, 崔玉康, 姜斌, 孟亦真, 马亚杰

刊讯

逻辑系统控制专题简介 1296
李海涛, 冯俊娥, 胡晓明

毫米波/太赫兹相控阵与系统集成技术专题简介 1299
毛军发, 吴柯, 张跃平, Jun YIN, 赵涤燮, 程钰间

Contents

Special Topic: Safety-Critical Control Theory and Application

A fault risk learning-based safety control method for UAVs..... 1029
 Jun BIAN, Jianchun ZHANG, Bin YANG, Kexin GUO, Jianfeng ZHANG, Xiang YU & Lei GUO

Adaptive dynamic programming with control barrier functions for safety-critical control applications..... 1043
 Xianning LI, Yebin WANG & Zhong-Ping JIANG

Distributed tunable input-to-state safety-critical control for interconnected multi-agent systems under deception attacks 1055
 Xiaomin HUANG, Lijun LONG, Shixin LIU & Yiguang HONG

Safety control of nonlinear systems driven by signal temporal logic semantics..... 1073
 Weiling KE, Xinyue ZHAO, Zhongyao CHEN, Hao FANG & Xin'ao ZHANG

Secure control of nonlinear systems under DoS attacks with state constraints..... 1089
 Ruolin SONG, Yiguang HONG, Yi DONG, Bin XIN, Qing WANG & Xi CHEN

Topological structure identification method for complex networks with anomalous edges 1101
 Yaozhong ZHENG, Hai-Tao ZHANG & Yuanyuan HU

RESEARCH PAPER

High-precision boundary-driven and content-adaptive superpixel segmentation 1110
 Yunyang XU, Tianjiao HAN, Ying LI, Caiming ZHANG & Xuemei LI

Information-bottleneck-decoupled-representations-based contrastive multi-view clustering method..... 1135
 Luwei HAN, Yongchao WANG, Xiuli BI, Jianfeng MA, Xinbo GAO & Bin XIAO

Sampling Lovász local lemma for solutions to general constraint satisfaction problems 1154
 Kun HE, Chunyang WANG & Yitong YIN

Parameterized approximations for the minimax (k, z) -clustering problem 1195
 Zhen ZHANG, Yige YUAN, Di WU, Zhiping TIAN & Qilong FENG

SUNET: an emerging network under the cloud-network-end collaborative security paradigm 1206
 Liang WANG & Liangmin WANG

Data-driven control for input-delayed systems based on model reduction 1228
 Yuan MENG, Ying ZHANG, Wennian QI & Jie ZHANG

Tracking control of flexible spacecraft in three-dimensional space 1244
 Xiao-Hui WU, Jun-Min WANG & Xiang-Dong LIU

Power coordination control strategy for AC-DC hybrid microgrids based on distributed economic model predictive control 1261
 Shaowen ZHAO, Yi ZHANG & Xiangjie LIU

Stackelberg game-based trajectory tracking control and obstacle avoidance for USVs under hostile target interference 1279
 Liyan WEN, Yukang CUI, Bin JIANG, Yizhen MENG & Yajie MA

EDITORIAL NOTE

Special topic: logical system control 1296
 Haitao LI, June FENG & Xiaoming HU

Special topic: millimeter-wave and terahertz phased-array and system-integration technologies 1299
 Junfa MAO, Ke WU, Yueping ZHANG, Jun YIN, Dixian ZHAO & Yuejian CHENG