



中国科技期刊卓越行动计划项目入选期刊

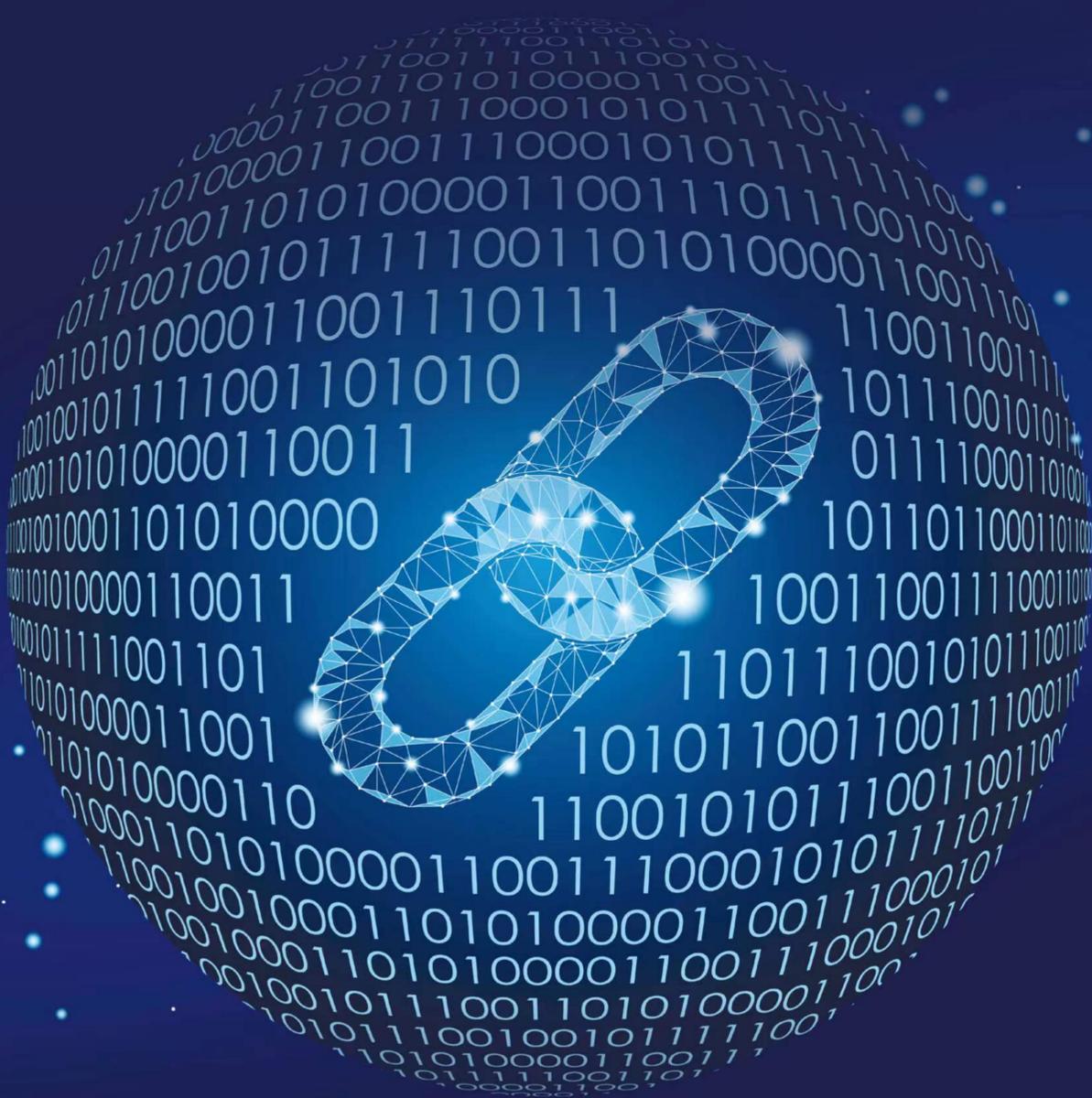
控制与决策

C O N T R O L A N D D E C I S I O N

智能优化在软件测试
中的应用综述

基于矩阵半张量积的有限值动态
系统的最新进展

政府补贴和成本共担如何影响平台和企业
策略选择 —— 基于三方演化博弈



2

2022

第37卷 第2期
Vol.37 No.2



官方服务号

ISSN 1001-0920
CN 21-1124/TP
CODEN KYJUEF

控制与决策

第37卷 第2期 2022年2月

目次

新兴交叉领域发展特邀综述

- 智能优化在软件测试中的应用综述·····姚香娟, 田甜, 党向盈, 孙百才, 巩敦卫 (257)
基于矩阵半张量积的有限值动态系统的最新进展·····冯俊娥, 李怡靓, 赵荣 (267)

综述与评论

- 基于深度强化学习的机器人运动控制研究进展·····董豪, 杨静, 李少波, 王军, 段仲静 (278)

论文与报告

- 政府补贴和成本共担如何影响平台和企业策略选择——基于三方演化博弈·····周晓阳, 赵凡, 刘莹, 汪寿阳 (293)
基于改进双层蚁群算法的工业机器人路径规划·····张恒, 何丽, 袁亮, 冉腾 (303)
基于钢琴触键动作的教育辅助型外骨骼机械手设计·····蔡蓉杰, 丁伯慧, 李泽, 丁晨阳 (314)
非平坦地形下工业机器人安全路径规划·····黄志清, 李鼎鑫, 王庆文 (323)
零售商定价/订货决策下竞争/互补制造商采用RFID的策略研究·····张李浩, 张诚, 陈靖 (331)
基于自适应正态云模型的引力樽海鞘群算法·····张铸, 张仕杰, 饶盛华, 王静袁 (344)
基于紧凑混合网络的视网膜血管自动分割·····罗凌, 薛定宇, 冯兴隆 (353)
具有有限时间输出约束的切换非线性时滞系统的多维泰勒网自适应控制·····初蕾, 朱善良, 王明新, 韩玉群 (361)
考虑共享电池站和温控负荷响应的综合能源系统优化调度·····杨婕, 王伟强, 马锴, 住安湖, 焦宗旭 (370)
异构云环境下AHP定权的多目标强化学习作业调度方法·····袁景凌, 陈昱骋, 江涛, 李超 (379)
一种基于多策略差分进化的分解多目标进化算法·····邓武, 蔡幸, 周永权, 赵慧敏, 徐俊洁 (387)
复杂人力资源约束下的抢占式维修工序调度·····孙笑, 宋卫星, 班利明, 齐小刚 (393)
基于动态事件触发的状态饱和和复杂网络递推滤波·····高宏宇, 张曼容, 姜博, 董宏丽 (401)
基于径向基神经网络的新型齿轮故障诊断方法·····薛萍, 郝鹏, 王宏民 (409)
基于动态观测的随机离散事件系统故障诊断·····黄楠, 刘富春, 赵锐, 崔洪刚 (417)
一种两相幂次吸引律离散时间控制方法·····陈强, 叶艳, 胡轶, 孙明轩 (424)
多智能体系统的多步近似次梯度随机投影优化算法·····高文华, 钟衍楠 (431)
一类多模块网络存储系统分散式控制方法·····郭鹏辉, 贾正荣, 肖飞, 芮万智, 许金 (438)
基于改进秃鹰搜索算法的同步优化特征选择·····贾鹤鸣, 姜子超, 李瑶 (445)
多尺度集值决策信息系统·····陈应生, 李进金, 林荣德, 陈东晓, 黄哲煌 (455)
蓄意攻击样本有限不平衡下运输系统关键危险源识别·····杨黎霞, 许茂增, 陈仁祥, 吴昊年 (464)
考虑时变速度的多车场绿色车辆路径模型及优化算法·····周鲜成, 吕阳, 贺彩虹, 刘长石, 杨堃 (473)
基于一种新得分函数和累积前景理论的毕达哥拉斯模糊TOPSIS法·····李美娟, 卢锦呈 (483)

短文

- 高速简单循环单元网络·····胡枫, 吴义熔, 董方敏, 邹耀斌, 孙水发 (493)
移动agent系统安全问题的动态信任计算模型·····蒋伟进, 吕斯健 (499)
自适应快速弱敏无迹Kalman滤波算法·····娄泰山, 王晓乾, 赵良玉, 赵素娜 (506)

信息与动态

- 下期要目····· (512)
《控制与决策》第七届编辑委员会····· (封4)

期刊基本参数: CN21-1124/TP * 1986 * m * A4 * 256 * zh * P * ¥50.00 * 1200 * 29 * 2022-02

责任编辑: 郑晓蕾 英文审校: 滕蓉

Control and Decision

Vol. 37 No. 2 Feb. 2022

CONTENTS

Invited Review of New Development in Emerging Inter-disciplinary Fields

Review on the application of intelligent optimization in software testing

..... YAO Xiang-juan, TIAN Tian, DANG Xiang-ying, SUN Bai-cai, GONG Dun-wei (257)

Recent developments of finite-valued dynamic systems based on semi-tensor product of matrices FENG Jun-e, LI Yi-liang, ZHAO Rong (267)

Surveys and Reviews

Research progress of robot motion control based on deep reinforcement learning

..... DONG Hao, YANG Jing, LI Shao-bo, WANG Jun, DUAN Zhong-jing (278)

Papers and Reports

How do government subsidies and cost sharing affect platform and enterprise strategy choice — Based on tripartite evolutionary game

..... ZHOU Xiao-yang, ZHAO Fan, LIU Ying, WANG Shou-yang (293)

Mobile robot path planning using improved double-layer ant colony algorithm ZHANG Heng, HE Li, YUAN Liang, RAN Teng (303)

Design of education assisted hand exoskeleton based on piano touching action CAI Rong-jie, DING Bo-hui, LI Ze, DING Chen-yang (314)

Safe path planning of mobile robot in uneven terrain HUANG Zhi-qing, LI Ding-xin, WANG Qing-wen (323)

Equilibrium strategies for RFID adoption of two competitive/complementary manufacturers with a retailer's pricing/ordering decision

..... ZHANG Li-hao, ZHANG Cheng, CHEN Jing (331)

Gravity salp swarm algorithm based on adaptive normal cloud model ZHANG Zhu, ZHANG Shi-jie, RAO Sheng-hua, WANG Jing-yuan (344)

Automatic segmentation of retinal vessel via compact mixed network LUO Ling, XUE Ding-yu, FENG Xing-long (353)

Multi-dimensional Taylor network adaptive control for switched time-delay systems with finite-time output constraints

..... CHU Lei, ZHU Shan-liang, WANG Ming-xin, HAN Yu-qun (361)

Optimal scheduling of integrated energy system considering response of shared battery station and thermostatically controlled loads

..... YANG Jie, WANG Wei-qiang, MA Kai, ZHU An-hu, JIAO Zong-xu (370)

Multi-objective reinforcement learning job scheduling method using AHP fixed weight in heterogeneous cloud environment

..... YUAN Jing-ling, CHEN Min-cheng, JIANG Tao, LI Chao (379)

A novel decomposition multi-objective evolutionary algorithm based on differential evolution model with multi-strategy

..... DENG Wu, CAI Xing, ZHOU Yong-quan, ZHAO Hui-min, XU Jun-jie (387)

Preemptive maintenance process scheduling under complex human resource constraints

..... SUN Xiao, SONG Wei-xing, BAN Li-ming, QI Xiao-gang (393)

Recursive filtering for state saturated complex networks under dynamic event-triggered mechanism

..... GAO Hong-yu, ZHANG Man-rong, JIANG Bo, DONG Hong-li (401)

Novel gear fault diagnosis method based on RBF neural network XUE Ping, HAO Peng, WANG Hong-min (409)

Failure diagnosis of stochastic discrete event systems based on dynamic observations

..... HUANG Nan, LIU Fu-chun, ZHAO Rui, CUI Hong-gang (417)

A two-phase power attracting law based discrete-time control CHEN Qiang, YE Yan, HU Yi, SUN Ming-xuan (424)

Multi-step approximate subgradient random projection optimization algorithm for multi-agent system GAO Wen-hua, ZHONG Yan-nan (431)

Decentralized control method for multi-module grid-based storage system

..... GUO Peng-hui, JIA Zheng-rong, XIAO Fei, RUI Wan-zhi, XU Jin (438)

Simultaneous feature selection optimization based on improved bald eagle search algorithm JIA He-ming, JIANG Zi-chao, LI Yao (445)

Multi-scale set value decision information system CHEN Ying-sheng, LI Jin-jin, LIN Rong-de, CHEN Dong-xiao, HUANG Zhe-huang (455)

Intelligent identification of critical hazard sources in transport system with deliberate attack sample finite unbalance

..... YANG Li-xia, XU Mao-zeng, CHEN Ren-xiang, WU Hao-nian (464)

Multi-depot green vehicle routing model and its optimization algorithm with time-varying speed

..... ZHOU Xian-cheng, LV Yang, HE Cai-hong, LIU Chang-shi, YANG Kun (473)

Pythagorean fuzzy TOPSIS based on novel score function and cumulative prospect theory LI Mei-juan, LU Jin-cheng (483)

Brief Papers

Highway-simple recurrent unit network HU Feng, WU Yi-rong, DONG Fang-min, ZOU Yao-bin, SUN Shui-fa (493)

Mobile internet mobile agent system dynamic trust model for cloud computing JIANG Wei-jin, LV Si-jian (499)

Adaptive fast desensitized unscented Kalman filter algorithm LOU Tai-shan, WANG Xiao-qian, ZHAO Liang-yu, ZHAO Su-na (506)

Serial parameters: CN21-1124/TP * 1986 * m * A4 * 256 * zh * P * ¥50.00 * 1200 * 29 * 2022-02