

## 目次

### 电磁攻防

非理想干扰对消条件下扰中侦系统性能分析与功率优化 ..... 葛松虎,张雲硕,郭宇,邢金岭,李毅,孟进(1)

子阵级单脉冲四通道主瓣干扰对消角度分辨率分析 ..... 吴灏,刘让,郭宇,王万田,张嘉毫,孟进(8)

多源宽带干扰对消建模及干扰抑制需求分析 ..... 秦焕丁,孟进,何方敏,葛松虎,邢金岭,王衡峰(17)

复杂干扰杂波环境下三维目标检测前跟踪算法 ..... 薄钧天,张嘉毫,于洪波,张翔宇,罗峰谊,俞溪,李伟,王衡峰,孟进(26)

应用于宽频带通信干扰对消的重构滤波器设计 ..... 张雲硕,王泽,李亚星,何方敏,刘宏波,孟进(37)

非合作干扰对消技术中空间分辨率建模与分析 ..... 李哲宇,李亚星,张嘉毫,罗康,何方敏,孟进(45)

### 控制科学与工程·信息与通信工程

非最小相位高超声速飞行器的动态滑模镇定控制 ..... 王雨潇,丰航,赵昱宇,孙明玮(54)

电动缸举升机构伺服性能的亚全局并行优化设计 ..... 万子平,谢馨,任广安,郑杰基,范大鹏(65)

负载目标下基于延迟分配的多层级相依网络级联失效模型 ..... 张家瑞,黄健,高家隆(79)

联合小波-频域变换的自适应能量检测 ..... 何继爱,李志鑫,王焯飞,张晓霖(90)

红外系统对战机的探测性能仿真分析 ..... 王亮,童忠诚,吴俊(99)

变泄漏容腔内气体的高精度恒压控制 ..... 浦晨玮,罗辉,吴洁,刘磊,钱鹏飞(110)

GNSS-R外辐射源雷达微弱目标回波盲检测方法 ..... 温媛媛,白琳,尚社,宋大伟,王俊(121)

舰载机及其尾钩的动力学建模与分析 ..... 丁智深,欧阳斌,刘勇(131)

### 航空宇航科学与技术

天拓五号卫星推进系统在轨故障诊断与定位方法 ..... 赵勇,吴宗谕,梁昊鹏,绳涛,申智帅,周璇(141)

星链Ⅲ期回归共地面轨迹星座构型与覆盖分析 ..... 王迪,骆盛,王勇,王磊(150)

5 A发射电流空心阴极热特性模拟分析 ..... 代鹏,孙明明,耿海,谷增杰,王东升(159)

含缺陷2195-T8铝锂合金疲劳断裂与仿真分析 ..... 刘德俊,田干,李玉龙,金国锋,张炜(168)

矩形模型火箭发动机横向不稳定燃烧的数值模拟 ..... 任永杰,郭康康,徐伯起,仝毅恒,聂万胜(179)

### 计算机科学与技术

时间敏感网络延时组成的精确分析与测量方法 ..... 付文文,全巍,姜旭艳,孙寅涵,孙志刚(189)

网络切片可编程数据平面模型 ..... 刘忠沛,吕高锋,王继昌,杨翔瑞(200)

面向大规模异构计算平台的MiniGo高效训练方法 ..... 李荣春,贺周雨,乔鹏,姜晶菲,窦勇,李东升(209)

通过包络面重构的大规模粒子并行绘制算法 ..... 王华维,艾志玮,曹轶(219)

执行时间预测驱动的工作流作业调度 ..... 胡亚红,邱圆圆,毛家发(228)

# JOURNAL OF NATIONAL UNIVERSITY OF DEFENSE TECHNOLOGY

Vol. 46 No. 5

October 2024

## CONTENTS

### Electromagnetic Offense and Defense

- Performance analysis and power optimization for simultaneous jamming and intercepting system with imperfect interference cancellation ..... *GE Songhu, ZHANG Yunshuo, GUO Yu, XING Jinling, LI Yi, MENG Jin* ( 1 )
- Angular resolution analysis of four-channel mainlobe interference cancellation for monopulse at subarray level ..... *WU Hao, LIU Rang, GUO Yu, WANG Wantian, ZHANG Jiahao, MENG Jin* ( 8 )
- Analysis of modeling and interference suppression requirement of multi-source wideband interference cancellation ..... *QIN Huanding, MENG Jin, HE Fangmin, GE Songhu, XING Jinling, WANG Hengfeng* ( 17 )
- 3D target track before detect algorithm in complex environment with interference and clutter ..... *BO Juntian, ZHANG Jiahao, YU Hongbo, ZHANG Xiangyu, LUO Fengyi, YU Xi, LI Wei, WANG Hengfeng, MENG Jin* ( 26 )
- Reconstructed filter design for broadband communication interference cancellation ..... *ZHANG Yunshuo, WANG Ze, LI Yaxing, HE Fangmin, LIU Hongbo, MENG Jin* ( 37 )
- Modeling and analysis of spatial resolution in noncooperative interference cancellation technique ..... *LI Zheyu, LI Yaxing, ZHANG Jiahao, LUO Kang, HE Fangmin, MENG Jin* ( 45 )

### Control Science and Engineering · Information and Communication Engineering

- Dynamic sliding mode stabilization control for nonminimum phase hypersonic vehicle ..... *WANG Yuxiao, FENG Hang, ZHAO Yuyu, SUN Mingwei* ( 54 )
- Sub-global parallel optimization design of servo performance of electric cylinder lifting mechanism ..... *WAN Ziping, XIE Xin, REN Guang'an, ZHENG Jieji, FAN Dapeng* ( 65 )
- Cascading failure model for multi-level interdependent networks based on delay distribution under load target ..... *ZHANG Jiarui, HUANG Jian, GAO Jialong* ( 79 )
- Adaptive energy detection with joint wavelet-frequency domain transform ..... *HE Jiai, LI Zhixin, WANG Chanfei, ZHANG Xiaolin* ( 90 )
- Simulation analysis of detecting capability of infrared system for fight plane ..... *WANG Liang, TONG Zhongcheng, WU Jun* ( 99 )
- High-precision constant pressure control of gas in variable leakage chamber ... *PU Chenwei, LUO Hui, WU Jie, LIU Lei, QIAN Pengfei* ( 110 )
- Blind detection method of weak target echo in GNSS-R passive radar ... *WEN Yuanyuan, BAI Lin, SHANG She, SONG Dawei, WANG Jun* ( 121 )
- Dynamic modeling and analysis of carrier-based aircraft and arresting hook ..... *DING Zhishen, OUYANG Bin, LIU Yong* ( 131 )

### Aeronautical and Astronautical Science and Technology

- On-orbit fault diagnosis and location method for the propulsion system of the TianTuo-5 satellite ..... *ZHAO Yong, WU Zongyu, LIANG Haopeng, SHENG Tao, SHEN Zhishuai, ZHOU Xuan* ( 141 )
- Constellation configuration and coverage analyses for recursive orbit and common track of Starlink phase III ..... *WANG Di, LUO Sheng, WANG Yong, WANG Lei* ( 150 )
- Simulation analysis on the thermal characteristics of 5 A emission current hollow cathode ..... *DAI Peng, SUN Mingming, GENG Hai, GU Zengjie, WANG Dongsheng* ( 159 )
- Fatigue fracture behavior and simulation analysis on 2195-T8 Al-Li alloys with defects ..... *LIU Dejun, TIAN Gan, LI Yulong, JIN Guofeng, ZHANG Wei* ( 168 )
- Numerical simulation of transverse combustion instability in a rectangle model rocket combustor ..... *REN Yongjie, GUO Kangkang, XU Boqi, TONG Yiheng, NIE Wansheng* ( 179 )

### Computer Science and Technology

- Precise analysis and measurement method for delay composition of time-sensitive networking ..... *FU Wenwen, QUAN Wei, JIANG Xuyan, SUN Yinhan, SUN Zhigang* ( 189 )
- Network slice programmable data plane model ..... *LIU Zhongpei, LYU Gaofeng, WANG Jichang, YANG Xiangrui* ( 200 )
- High efficient training method of MiniGo on large-scale heterogeneous computing platform ..... *LI Rongchun, HE Zhouyu, QIAO Peng, JIANG Jingfei, DOU Yong, LI Dongsheng* ( 209 )
- Parallel rendering algorithm for large-scale particles by wrapping surface reconstruction ..... *WANG Huawei, AI Zhiwei, CAO Yi* ( 219 )
- Workflows scheduling powered by execution time prediction model ..... *HU Yahong, QIU Yuanyuan, MAO Jiafa* ( 228 )