



中文核心期刊 中国指挥与控制学会会刊 中国科技论文统计源期刊
中国科学引文数据库来源期刊 军事学核心期刊 中文科技期刊数据库
中国学术期刊(光盘版)收录期刊 RCCSE中国核心学术期刊 美国
《剑桥科学文摘》美国《乌利希期刊指南》英国《科学文摘》收录期刊

ISSN 1002-0640

CN 14-1138/TJ

火力与指挥控制

FIRE CONTROL & COMMAND CONTROL

2021.1

第46卷 VOL46
第1期 No.1



ISSN 1002-0640



北方自动控制技术研究所主办

火力与指挥控制

HUOLI YU ZHIHUI KONGZHI

本刊名由张爱萍将军题写

第 46 卷 第 1 期 (总第 310 期)

月刊 1976 年创刊 国内外公开发行

目次

综述	基于禁忌搜索的作战重心分析与选择方法
视觉惯性 SLAM 研究进展	..... 张国辉, 杨 征, 杜正军, 周江平(94)
..... 郭金辉, 陈秀万, 王 媛(1)	战术级空地联合行动空域管控: 空中“红绿灯”技术
理论研究	..... 乔沛昊, 陈 勇, 薛文军, 冯培伦, 邢 欣(103)
防空反导战术级指控系统体系架构研究	时域下空间曲线曲率及挠率问题的研究
..... 张家瑞, 王 刚, 王思远(9)	..... 许 飞, 刘翠香, 闵祥娟, 单彩虹, 曹贻鹏(108)
基于改进 SSD 框架的遥感影像飞机目标检测方法	工程实践
..... 王 冰, 周 焰, 张怀念, 赵 凯(14)	卡尔曼滤波补偿在潜载光电跟瞄中的应用
基于 Focal Loss 的多特征融合地物小目标检测	..... 张雨恒, 刘宗凯, 周本谋, 刘禹铭(112)
..... 宋建辉, 饶 威, 于 洋, 刘砚菊(20)	一种高效节能的小世界无线传感器网络
混合 MIMO 相控阵雷达反向非均匀重叠子阵分割方法	..... 柳 艳, 肖 旻, 王纪军, 陈咏秋, 徐明生(117)
..... 程天昊, 王布宏, 李 夏(25)	装备 CBM 与 IETM 智能维修系统的集成研究
基于卷积神经网络的多功能雷达行为辨识研究	..... 杜晓明, 郭德兴, 朱 宁, 姜相争(123)
..... 方 涛, 陈秋菊, 潘继飞, 毕大平(32)	一种轮式装甲车模拟器转向机构力感模型
基于“网云端”的新型指挥控制系统体系结构建模	..... 魏国强, 朱元武, 朱 锐, 罗 浩, 武 帆(129)
..... 余宏峰, 李琳琳, 肖 彬, 金 明(38)	一种基于可用性的战术通信子网评估方法
基于属性匹配的装备保障体系建模方法研究	..... 李 杰, 卢 颖, 曲少春, 郭 琪, 傅妍芳(136)
..... 徐耀耀, 吕亚娜, 邱少明, 陈 波(44)	装备保障兵棋动态评估方法研究
基于并行学习鲁棒自适应的多操纵面飞机故障估计方法	..... 熊先巍, 陈 琳, 王文忠(142)
..... 刘 静, 丛 岩, 赵 迪(50)	作战模式及需求不确定条件下备件供应优化
通用防空反导火力优化分配方法	..... 王亚东, 石 全, 张 芳, 王 强, 夏 伟(147)
..... 王玉茜, 张 栋(56)	基于灰狼优化算法的军用运输机航路规划方法
基于 Vague 集 ELINT 系统的效能评估算法	..... 魏燕明, 甘旭升, 刘 飞, 孙静娟(155)
..... 邱日升, 潘继飞, 李为圣, 赵 君(62)	基于 D-S 证据理论的航母舰机融合效能评估方法
变幂次趋近律的滑模制导在防空反导中的应用	..... 于艺彬, 郭传福, 王洪胜(162)
..... 穆忠伟, 吴 剑, 韩秀枫(67)	试验技术
基于 FFT 的数字回波信号时域波形优化研究	高炮射击诸元离线式试验方法
..... 梁书娟(73)	..... 史海龙, 王晶晶, 杜 伟, 陈国军, 任成才(168)
反舰导弹辐射源行为分析中的贝叶斯方法	基于以太网高速协议通道的 FPGA 端系统设计
..... 崔 凯, 宋新超, 秦长海(78)	..... 王 乐, 赵 刚, 孙伟龙(172)
基于 ARMA-BP 组合模型的装备故障率预测方法	基于小波包能量谱的装备悬臂梁结构损伤诊断
..... 徐 达, 周 诚, 关 鑫, 王小闯(83)	..... 李 浩, 毋文峰, 蒲 云, 贺凯滨(177)
基于优化神经网络的雷达波束分配方法研究	通知(8) 下期要目(111) 报道(167)
..... 朱光耀, 张贞凯(88)	

本期责任编辑 张宇燕, 刘义平

[期刊基本参数] CN14-1138/TJ * 1976 * m * A4 * 182 * zh * P * ¥60.00 * 1 500 * 31 * 2021-01

Fire Control & Command Control

Vol. 46 No. 1 Jan. 2021

Contents

SURVEY

A Review of Visual Inertial SLAM Research Development GUO Jin-hui, CHEN Xiu-wan, WANG Yuan(1)

THEORY RESEARCH

Research on the Architecture of Air and Missile Defense of Tactics-level Command and Control System

..... ZHANG Jia-rui, WANG Gang, WANG Si-yuan(9)

Aircraft Detection Method Based on SSD Framework for Remote Sensing Images WANG Bing, ZHOU Yan, ZHANG Huai-nian, ZHAO Kai(14)

Multi Feature Fusion Small Target Detection Based on Focal Loss SONG Jian-hui, RAO Wei, YU Yang, LIU Yan-ju(20)

Reversed Unequal Overlapping Subarray Partitioning Method for Hybrid Phased-MIMO Radar
..... CHENG Tian-hao, WANG Bu-hong, LI Xia(25)

Research on Multifunctional Radar Behavior Identification Based on Convolutional Neural Network
..... FANG Yi, CHEN Qiu-ju, PAN Ji-fei, BI Da-ping(32)

Architecture Modeling of New C2 System Based on "Network-Cloud-End" YU Hong-feng, LI Lin-lin, XIAO Bin, JIN Ming(38)

Research on Modeling Method of Equipment Support System Based on Attribute Matching
..... XU Yao-yao, LYU Ya-na, QIU Shao-ming, CHEN Bo(44)

A Robust Adaptive Fault Estimation Method for Multi-control Surface Aircraft Based on Parallel Learning
..... LIU Jing, CONG Yan, ZHAO Di(50)

Research on Firepower Optimization Allocation Method for General Air Defense and Antimissile
Effectiveness Evaluation on Algorithm ELINT System Based on Vague Sets
..... QIU Ri-sheng, PAN Ji-fei, LI Wei-sheng, ZHAO Jun(62)

Application of Sliding Mode Guidance with Variable-power Approach Law to Air Defense and Anti-missile
..... MU Zhong-wei, WU Jian, HAN Xiu-feng(67)

Research on Time-domain Waveform Optimization of Digital Echo Signal Based on FFT LIANG Shu-juan(73)

Bayesian Methods in Analysis of ASM Radar Mode CUI Kai, SONG Xin-chao, QIN Chang-hai(78)

Research on the Equipment Failure Rate Prediction Method Based on ARMA-BP Combined Model
..... XU Da, ZHOU Cheng, GUAN Chu, WANG Xiao-chuang(83)

A Study on the Radar Beam Allocation Method Based on the Optimized Neural Network ZHU Guang-yao, ZHANG Zhen-kai(88)

Analysis and Selection Method of Operational Center of Gravity Based on Tabu Search
..... ZHANG Guo-hui, YANG Zheng, DU Zheng-jun, ZHOU Jianguo-ping(94)

Airspace Control for Tactical Open Space Joint Operations: Traffic Light Technology in the Sky
..... QIAO Pei-hao, CHEN Yong, XUE Wen-jun, FENG Pei-lun, XING Xin(103)

Research on Curvature and Torsion of Space Curve in Time Domain XU Fei, LIU Cui-xiang, MIN Xiang-juan, SHAN Cai-hong, CAO Yi-peng(108)

..... XU Fei, LIU Cui-xiang, MIN Xiang-juan, SHAN Cai-hong, CAO Yi-peng(108)

ENGINEERING PRACTICE

The Application of Kalman Filtering in Submarine Photoelectric Tracking and Aiming
..... ZHANG Yu-heng, LIU Zong-kai, ZHOU Ben-mou, LIU Yu-ming(112)

An Energy Efficient Wireless Sensor Networks Based on Small World Model
..... LIU Yan, XIAO Min, WANG Ji-jun, CHEN Yong-qiu, XU Ming-sheng(117)

An Integration Research on Equipment CBM and IETM Intelligent Maintenance System
..... DU Xiao-ming, GUO De-xing, ZHU Ning, JIANG Xiang-zheng(123)

A Force-sensing Model of Steering Mechanism of a Kind of Wheeled Armored Vehicle Simulator
..... WEI Guo-qiang, ZHU Yuan-wu, ZHU Rui, LUO Hao, WU Fan(129)

A Tactical Communication Subnet Evaluation Method Based on Availability
..... LI Jie, LU Ying, QU Shao-chun, GUO Qi, FU Yan-fang(136)

Research on Dynamic Evaluation of Wargaming for Equipment Support XIONG Xian-wei, CHEN Lin, WANG Wen-zhong(142)

Spare Parts Supply Optimization in Uncertain Combat Mode and Demand Conditions
..... WANG Ya-dong, SHI Quan, ZHANG Fang, WANG Qiang, XIA Wei(147)

Route Planning Method for Military Transport Aircraft Based on Grey Wolf Optimization Algorithm
..... WEI Yan-ming, GAN Xu-sheng, LIU Fei, SUN Jing-juan(155)

The Method Based on Dempster-shafer Evidence Theory about the Effectiveness Evaluating of the Fusion between the Warship and the Aircraft
of the Aircraft Carrier YU Yi-bin, GUO Chuan-fu, WANG Hong-sheng(162)

TEST TECHNIQUE

A Offline Test Method for Firing Data Accuracy of Antiaircraft Gun
..... SHI Hai-long, WANG Jing-jing, DU Wei, CHEN Guo-jun, REN Cheng-cai(168)

FPGA-end System Design Based on Ethernet High Speed Protocol Channel WANG Le, ZHAO Gang, SUN Wei-long(172)

Cantilever Beam Structure Damage Diagnosis Based on Weaponry Wavelet Packet Energy Spectrum
..... LI Hao, WU Wen-feng, PU Yun, HE Kai-bin(177)