

目次

智能舰船自主航行技术专栏(专栏主编:张兰勇,哈尔滨工程大学 教授、博导)

- 基于轻量级 YOLOv4 与 KCF 的复杂海面舰船目标识别 金敏捷,童雨舟(1)
- YOLOv7-F:一种轻量级船舶实时检测算法 王 微,郁 强,王五桂,邢博闻(11)
- 基于无偏量测转换的机动目标跟踪信息滤波算法 王 韬,陈 琦,高 鹏(19)
- 基于强化学习的自适应人工势场航迹规划方法 郭 靖,李 响,鲜 勇(25)
- 基于新型 TSM 的船舶动力定位系统控制研究 王宇超,陈佳豪,邵兴超,屈银松,傅荟璇(34)

现代引信技术专栏(专栏主编:陈慧敏,北京理工大学 副教授)

- 弹丸刚体外弹道及其引信力学环境数值解算稳定性 回建豪,王雨时,闻 泉,彭启蒙(42)
- 基于主动磁探测的侵彻引信磁异响应特性研究 曹 娟,赵 静,马 帅(51)
- 引信全电子安全系统安全性研究 白 欣,刘凤丽,郝永平,潘 洁(59)
- 基于时域可变响应度的激光引信研究 李琪琪,李 慧,张诗敏,李玉钊(68)
- 航空炸弹引信多姿态惯性发火性能研究 陆俊桦,岳明凯,张 骢,冯恒振,齐佳硕,王 瑜(73)
- 基于有限元的帽形感应装定引信接收骨架的优化方法 符超群,崔 佳,张 晨,赵云峰,智小军(83)

装备理论与装备技术

- 基于 NGO-BP 的制导炮弹高空风场参数辨识研究 何 虎,易文俊(90)
- 机载布撒子弹药气动特性仿真分析 李 阳,杨 洲,杨鹏飞,肖 波,林 彬(96)
- 复杂自然环境下反应装甲干扰动能弹的数值模拟 吴昱昊,张冬梅,赵河明,李一舒,孔德景,于 静(102)
- 基于深度聚类算法的空中态势威胁挖掘 史志莹,张训立,王 超,辛浩男,刘 渊,翟 希(110)
- 枪弹底火能量释放特性试验研究与数值分析 梁敬国,魏志芳,魏艳忠,辛长范,向谭涛(116)
- 组合药型罩聚能装药结构参数对侵彻性能的影响 王晓东,徐永杰,赵雄飞,郑娜娜,王一凡(122)
- 线性聚能装药金属射流对钢板后方装药的引爆机理与判断 张 磊,谢兴博,杨贵丽,马华原,张雪梅(128)

基础理论与应用研究

- 基于齿靴型槽楔不等宽组合的 PMSLM 齿槽力抑制 许孝卓,李靖洲,蒋思远,尚泽健(142)
- 大偏转角度下层流翼型后缘变弯度气动特性分析与优化 王巍,黄茹,周艾,冯贺,王浩(151)
- 二次冲击加载下金属薄板的变形挠度规律研究 赵伟成,翟红波,毛伯永,徐其鹏(160)
- 复杂热环境下高空气球升空热动力学特性 程昊天,王梓皓,张泰华,杜千仟,曹胜鸿(170)
- 扑翼飞行器的气动特性及效率研究 黄中杰,双丰,蔡毓(181)
- 基于热缓冲探头的超声导波高温结构损伤诊断技术研究 张飞霆,张开富,程晖,蔡可怡,高东岳(188)
- 基于靶载多目标雷达的高炮射击精度测试研究 杨卫超,王亮宽,吴潇璞,唐旭,李鹏(196)
- 基于多目标优化的航空重油活塞发动机双质量飞轮毂盘结构轻量化设计 卢俊文,王斌,王倩莹(202)
- 马赫数分布可控轴对称进气道多目标优化设计 田新辉,李永洲,袁熠祺,杨学良,孙迪(212)
- 基于遗传算法和有限元计算联合仿真的尾翼轻量化设计 杨辉,易仁发(222)
- 基于有限元与试验数据的击针疲劳寿命分析 贾陆阳,杨正久,王冲,赵雄飞,刘万川(230)

信息科学与控制工程

- 基于 PID 理论的自触发 MPC 移动机器人控制方法 何党桐,马凯,李宇翔,贺宁,贺利乐(236)
- 实-虚结合的机械臂与数字孪生体协调控制 谢曼,王龙涛,陈中尹,胡绍林(243)
- 一种基于聚类算法的载波分配方法 徐东辉,刘江亮,刘思佚,刘丁胤(253)
- 静不稳定航弹弹道初始段姿态控制方法研究 周航,孙传杰,李永泽,谭晓军,陈伟(259)
- 基于误差的 LADRC 在无人机飞行高度控制中的应用及仿真研究 陈志刚,徐明兴,陈有兴,程艳青,刘滔(267)
- 基于数据驱动模型预测控制的无人机轨迹跟踪方法 於怿丰,任思维,张鑫帅,谢芳芳,季廷炜,杜昌平(272)
- 基于深度强化学习的无人机集群预测性维修决策算法 吴其隆,冯强,任羿,孙博(283)

光学工程与电子技术

- 基于改进 PP-YOLOE 和 ByteTrack 算法的红外船舶目标检测跟踪方法 姜杰,张立民,刘凯,闫文君(291)
- 海水环境光场水下辐照度测量光学设计 朱海荣,蔡鹏,张春磊,张晨阳,陈新东(298)
- 行进间炮口偏移状态光电测量技术研究 韩学锋,贺文君,王雯,刘毅,游亚军,丑修建(304)
- 基于四色结构光线图案的主动立体视觉匹配算法 行文轩,王振洲(310)

JOURNAL OF ORDNANCE EQUIPMENT ENGINEERING

Vol. 45 No. 11 (Sum. No. 316) Nov. 2024

CONTENTS

| | |
|--|--|
| Complex sea surface ship target recognition based on lightweight YOLOv4 and KCF | JIN Minjie, TONG Yuzhou(1) |
| YOLOv7-F: A lightweight real-time ship detection algorithm | WANG Wei, YU Qiang, WANG Wugui, et al(11) |
| An information filter based on modified unbiased converted measurement for maneuvering target tracking | WANG Tao, CHEN Qi, GAO Peng(19) |
| Adaptive artificial potential track planning method based on reinforcement learning | GUO Jing, LI Xiang, XIAN Yong(25) |
| Research on control of ship dynamic positioning system based on novel TSM | WANG Yuchao, CHEN Jiahao, SHAO Xingchao, et al(34) |
| The stability research of numerical solution for rigid body exterior ballistics and fuze mechanical environment in exterior ballistics | HUI Jianhao, WANG Yushi, WEN Quan, et al(42) |
| Research on magnetic anomaly response characteristics of penetration fuze based on active magnetic detection | CAO Juan, ZHAO Jing, MA Shuai(51) |
| Security system safety research for fully electronic initiators | BAI Xin, LIU Fengli, HAO Yongping, et al(59) |
| Research on laser fuze based on time-domain variable responsiveness | LI Qiqi, LI Hui, ZHANG Shimin, et al(68) |
| Research on the multi-attitude inertial ignition performance of aerial bomb fuze | LU Junhua, YUE Mingkai, ZHANG Cong, et al(73) |
| Optimization method of the receiving frame of the hat shaped induction set fuzebased on finite element | FU Chaoqun, CUI Jia, ZHANG Chen, et al(83) |
| Estimation of high-altitude wind parameters of guided projectile based on NGO-BP | HE Hu, YI Wenjun(90) |
| Simulation analysis of the aerodynamic characteristics of airborne submunitions | LI Yang, YANG Zhou, YANG Pengfei, et al(96) |
| Numerical simulation of reactive armor interfering kinetic energy projectile in complex natural environment | WU Yuhao, ZHANG Dongmei, ZHAO Heming, et al(102) |
| Aerial situation threat mining based on deep clustering algorithm | SHI Zhiying, ZHANG Xunli, WANG Chao, et al(110) |
| Experimental study and numerical analysis on energyrelease characteristics of bullet primer | LIANG Jingguo, WEI Zhifang, WEI Yanzhong, et al(116) |
| Effect of shaped charge structure parameters of combined liner on penetration performance | WANG Xiaodong, XU Yongjie, ZHAO Xiongfei, et al(122) |
| Detonation mechanism and judgment of a linear concentrated charge metal jet on a steel plate rear charge | ZHANG Lei, XIE Xingbo, YANG Guili, et al(128) |
| PMSLM cogging force suppression based on unequal-width combinations of tooth-boot-shaped slot wedge | XU Xiaozhuo, LI Jingzhou, JIANG Siyuan, et al(142) |
| Aerodynamic analysis and optimization of trailing-edge variable camber airfoil under large deflection angle | WANG Wei, HUANG Ru, ZHOU Ai, et al(151) |
| Study on deformation deflection law of metal sheet under secondary impact loading | ZHAO Weicheng, ZHAI Hongbo, MAO Boyong, et al(160) |

JOURNAL OF ORDNANCE EQUIPMENT ENGINEERING

Vol. 45 No. 11 (Sum. No. 316) Nov. 2024

| | |
|---|---|
| Study on the influence of release conditions on the ascending process of high-altitude balloons | CHENG Haotian, WANG Zihao, ZHANG Taihua, et al(170) |
| Research on aerodynamic characteristics and efficiency of flapping wing aircraft | HUANG Zhongjie, SHUANG Feng, CAI Yu(181) |
| Research on guided wave high temperature structural damage diagnosis technique based on thermal buffer probe | ZHANG Feiting, ZHANG Kaifu, CHENG Hui, et al(188) |
| Research on firing accuracy test method of anti-aircraft gun based on target drone with multi-target radar | YANG Weichao, WANG Liangkuan, WU Xiaopu, et al(196) |
| Lightweight design of flywheel hub structure for aviation heavy-fuel piston engine based on multi-objective optimization | LU Junwen, WANG Bin, WANG Qianying(202) |
| Mach number distribution controllable axisymmetric inlet multi-objective optimization design | TIAN Xinhui, LI Yongzhou, YUAN Yiqi, et al(212) |
| Lightweight design of tail fin based on co-simulation of genetic algorithm and finite element calculation | YANG Hui, YI Renfa(222) |
| Fatigue life analysis of firing pin based on finite element method and test date | JIA Luyang, YANG Zhengjiu, WANG Chong, et al(230) |
| Mobile robot control using self-triggered model predictive control and PID theory | HE Dangtong, MA Kai, LI Yuxiang, et al(236) |
| Coordinated control of robotic arm and digital twin based on the combination of physical and virtual entities | XIE Man, WANG Longtao, CHEN Zhongyin, et al(243) |
| A carrier allocation method based on clustering algorithm | XU Donghui, LIU Jiangliang, LIU Siyi, et al(253) |
| Research on attitude control method of statically unstable aerial bomb in initial trajectory section | ZHOU Hang, SUN Chuanjie, LI Yongze, et al(259) |
| Application and simulation research of error-based LADRC in UAV flight height control | CHEN Zhigang, XU Mingxing, CHEN Youxing, et al(267) |
| Data-driven model predictive control based method for unmanned aerial vehicle trajectory tracking | YU Yifeng, REN Siwei, ZHANG Xinshuai, et al(272) |
| A predictive maintenance decision algorithm for UAV swarms based on deep reinforcement learning | WU Qilong, FENG Qiang, REN Yi, et al(283) |
| Research on infrared ship target detection and tracking method based on improved PP-YOLOE and ByteTrack algorithms | JIANG Jie, ZHANG Limin, LIU Kai, et al(291) |
| Optical design for measuring underwater irradiance in seawater environment light field | ZHU Hairong, CAI Peng, ZHANG Chunlei, et al(298) |
| Research on optoelectronic measurement technology of muzzle offset state during marching | HAN Xuefeng, HE Wenjun, WANG Wen, et al(304) |
| Active stereo vision matching algorithm based on four color structured light line pattern | XING Wenxuan, WANG Zhenzhou(310) |