

目 次

塑料齿轮研究的进展和方向 石照耀, 辛栋 (627)

融合地形参数的 CYGNSS 青藏高原土壤湿度反演
..... 张云, 师丽云, 杨树瑚, 潘海燕, 韩彦岭, 洪中华 (643)

基于双参数的 GNSS/SINS 故障检测及抗差自适应算法 赵桂玲, 王金宝, 姜子昊, 高帅 (655)

增强上下文特征交互的实时无人机影像分割算法
..... 李云红, 张富星, 苏雪平, 李丽敏, 王梅, 梁成名 (668)

液压作动器差动连接下双唇级联靴形往复密封特性研究
..... 彭超, 谭爽, 叶强, 苗建明, 欧阳小平 (678)

基于 R 藤 Copula-DBN 齿轮箱故障诊断 王进花, 刘正奇, 曹洁, 刘昀强, 陈莉 (687)

横向非均匀积水对飞机滑水偏出跑道行为影响 李岳, 张耀华, 蔡靖, 任怡楠 (698)

一种无锚旋转框遥感图像船只目标检测算法 李露, 陈科研, 刘辰阳, 史振威 (706)

基于 SCACGAN 的小样本齿轮箱故障诊断 王进花, 刘秦玮, 曹洁, 陈莉 (713)

基于信息熵的客机倾斜姿态应急撤离评价 程明, 韦柯宇 (724)

飞机复合材料结构载荷测量的温度修正方法 李俊, 李文龙, 高腾龙, 李亚南, 刘敬礼 (736)

反舰弹道导弹杀伤效能的不确定性研究 王志辉, 相志宁, 高萍 (744)

双连孔力传感器柔度建模与应变解析 李立建, 唐守乾, 姚建涛, 王迎佳 (753)

多因素飞行冲突探测中的认知负荷评估方法 杨越, 马博凯, 程龙 (763)

矩形高层建筑顺风向脉动风荷载空间相关性 袁家辉, 陈水福, 夏俞超, 刘奕 (772)

基于相似性加权的复杂系统费用测算模型 常菊, 刘晓东, 何荧 (784)

半倾转构型旋翼飞行器纵向操纵策略研究 田洪源, 鲁森魁, 武上景 (791)

基于小波变换的压力脉动信号分析方法 覃子宇, 韩猛, 韩啸, 赵硕, 姜宇涵, 林宇震 (801)

涵道式冲压发电涡轮部件级性能模型建模和参数设计方法
..... 张华波, 郭迎清, 李桂财, 赵万里, 叶鹏 (809)

一种定转速涡桨发动机的简化建模方法 杨阳, 戴树岭, 雷小永 (818)

非均匀加热下超临界燃油在并联双管中质量流量分配特性 董昊, 赵超凡, 朱剑琴, 程泽源 (826)

基于 2D-FFT 与 2D-CFAR 的调频引信快速高精度信号处理方法
..... 张安琪, 曹荣刚, 周宇, 李佳武, 曹宇曦, 于永滨 (837)

强夯作用下夯沉量实用计算方法 许国一, 冯锦艳, OCHIENG J. OBONGO, 于卓奇, 童朝霞 (846)

双置信度下多特征自适应融合的红外弱小目标实时跟踪	陈家俊, 李响, 宋延嵩, 董小娜 (853)
超声速盘收口盘缝带伞不同收口比下气动性能	代雨柔, 李健, 荣伟, 薛晓鹏, 黄明星, 方康 (864)
丙烯工质平板环路热管的稳态建模与特性分析	
.....	贾志超, 毕涵礼, 彭正, 李国广, 吴琪, 张红星, 苗建印 (874)
生物航煤燃烧低压模化数值模拟	何彦潼, 邓甜, 王伟 (885)
红外遥感弱小船舶目标检测算法	谢友晨, 徐天阳, 汤张泳, 吴小俊 (895)
基于近似计算技术的逻辑电路 HDL 级面积优化	于宗源, 王伦耀, 储著飞, 夏银水 (908)
SMA 驱动多状态变后缘弯度机翼的设计、分析与实验	
.....	王子昂, 卢志荣, 李鸿濠, 周文雅, 王晓明 (917)
MRAM 芯片单粒子功能中断机制研究	刘羽寒, 马英起, 李世行, 王菡滨, 王碧 (926)
融合邻域信息的民间文学知识图谱补全	高方正, 王笳辉, 段亮, 岳昆, 李忠斌 (935)
城市环境改进点云配准的 LiDAR 辅助 GNSS/IMU 定位算法	黄明明, 孙蕊 (945)
小直径 C 形金属封严环多道次液压成形技术	刘春雷, 孟宝, 朱宇, 闫彬宇, 万敏 (955)
基于 FastSAM 辅助表示增强的自监督单目深度估计	张冬冬, 王春平, 付强 (964)

JOURNAL OF BEIJING UNIVERSITY OF AERONAUTICS AND ASTRONAUTICS

Vol. 52 No. 3 (Sum 397) March 2026

CONTENTS

Plastic gear's research progress and direction	SHI Zhaoyao, XIN Dong (627)
Integrating topography parameters for soil moisture retrieval using CYGNSS on the Qinghai-Tibet Plateau	ZHANG Yun, SHI Liyun, YANG Shuhu, PAN Haiyan, HAN Yanling, HONG Zhonghua (643)
A GNSS/SINS fault detection and robust adaptive algorithm based on two parameters	ZHAO Guiling, WANG Jinbao, JIANG Zihao, GAO Shuai (655)
Real-time UAV image segmentation algorithm with enhanced contextual feature interaction	LI Yunhong, ZHANG Fuxing, SU Xueping, LI Limin, WANG Mei, LIANG Chengming (668)
Investigation into characteristics of double-lip cascade boot-shaped reciprocating seals in differential-connection working conditions of hydraulic actuators	PENG Chao, TAN Shuang, YE Qiang, MIAO Jianming, OUYANG Xiaoping (678)
Gearbox fault diagnosis based on R-vine Copula-DBN	WANG Jinhua, LIU Zhengqi, CAO Jie, LIU Yunqiang, CHEN Li (687)
Influence on veer-off behavior of aircraft hydroplaning due to transverse uneven water accumulation	LI Yue, ZHANG Yaohua, CAI Jing, REN Yinan (698)
An anchor-free rotated box remote sensing image ship object detection algorithm	LI Lu, CHEN Keyan, LIU Chenyang, SHI Zhenwei (706)
Fault diagnosis of gearbox with small-sample based on SCACGAN	WANG Jinhua, LIU Qinwei, CAO Jie, CHEN Li (713)
Emergency evacuation assessment of aircraft tilting attitude based on information entropy	CHENG Ming, WEI Keyu (724)
Temperature correction method for load measurement of aircraft composite structures	LI Jun, LI Wenlong, GAO Tenglong, LI Yanan, LIU Jingli (736)
Research on uncertainty in kill effectiveness of anti-ship ballistic missiles	WANG Zhihui, XIANG Zhining, GAO Ping (744)
Compliance modeling and strain analysis of double-hole force sensor	LI Lijian, TANG Shouqian, YAO Jiantao, WANG Yingjia (753)
Cognitive load assessment method for multifactorial flight conflict detection	YANG Yue, MA Bokai, CHENG Long (763)
Spatial correlation of along-wind fluctuating wind loads on rectangular high-rise buildings	YUAN Jiahui, CHEN Shuifu, XIA Yuchao, LIU Yi (772)
Complex equipment cost estimation model based on similarity weight	CHANG Ju, LIU Xiaodong, HE Ying (784)
Research on longitudinal manipulation strategy of partial tilting aircraft	TIAN Hongyuan, LU Senkui, WU Shangjing (791)
Method for analyzing pressure fluctuation signals based on wavelet transform	QIN Ziyu, HAN Meng, HAN Xiao, ZHAO Shuo, JIANG Yuhan, LIN Yuzhen (801)
Modeling and parameter design methodology for component-level performance model of ducted ram air generation turbine	ZHANG Huabo, GUO Yingqing, LI Guicai, ZHAO Wanli, YE Peng (809)
A simplified modeling method for a constant speed turboprop engine	YANG Yang, DAI Shuling, LEI Xiaoyong (818)
Mass flow distribution characteristics of supercritical fuel oil in parallel tubes under non-uniform heating conditions	DONG Hao, ZHAO Chaofan, ZHU Jianqin, CHENG Zeyuan (826)
Fast and high precision signal processing method for frequency modulation fuze based on 2D-FFT and 2D-CFAR	ZHANG Anqi, CAO Ronggang, ZHOU Yu, LI Jiawu, CAO Yuxi, YU Yongbin (837)

Practical calculation method for settlement under dynamic compaction	XU Guoyi, FENG Jinyan, OCHIENG J. OBONGO, YU Zhuoqi, TONG Zhaoxia (846)
Real-time tracking of infrared dim-small target with multi-feature adaptive fusion under double confidence	CHEN Jiajun, LI Xiang, SONG Yansong, DONG Xiaona (853)
Aerodynamic characteristics of supersonic mid-gore reefing disk-gap-band parachute under different reefing ratios	DAI Yurou, LI Jian, RONG Wei, XUE Xiaopeng, HUANG Mingxing, FANG Kang (864)
Steady state modeling and characteristic analysis of propylene flat loop heat pipes	JIA Zhichao, BI Hanli, PENG Zheng, LI Guoguang, WU Qi, ZHANG Hongxing, MIAO Jianyin (874)
Numerical simulation of low-pressure modeling of bio-jet coal combustion	HE Yantong, DENG Tian, WANG Wei (885)
Detecting small ship targets via infrared remote sensing	XIE Youchen, XU Tianyang, TANG Zhangyong, WU Xiaojun (895)
Area optimization of logic circuits in HDL-level using approximate computing	YU Zongyuan, WANG Lunyao, CHU Zhufei, XIA Yinshui (908)
Design, analysis, and experimentation of SMA-driven multi-state variable camber wing	WANG Ziang, LU Zhirong, LI Honghao, ZHOU Wenya, WANG Xiaoming (917)
Research on single-event function interruption mechanism of MRAM chips	LIU Yuhan, MA Yingqi, LI Shixing, WANG Hanbin, WANG Bi (926)
Folklore knowledge graph completion by fusing neighborhood information	GAO Fangzheng, WANG Jiahui, DUAN Liang, YUE Kun, LI Zhongbin (935)
LiDAR aided GNSS/IMU positioning algorithm based on improved point cloud registration in urban environment	HUANG Mingming, SUN Rui (945)
Multi-steps hydroforming technology of small diameter C-shaped metallic seal ring	LIU Chunlei, MENG Bao, ZHU Yu, YAN Binyu, WAN Min (955)
FastSAM-assisted representation enhancement for self-supervised monocular depth estimation	ZHANG Dongdong, WANG Chunping, FU Qiang (964)