

ACTA AERONAUTICA ET ASTRONAUTICA SINICA

中国航空学会 北京航空航天大学

ISSN 1000-6893
CN 11-1929/V

航空学报

1

2023 / Vol.44

HANGKONG XUEBAO

结冰和防冰研究专栏

飞机过冷大水滴结冰
气象条件运行设计挑战

陈勇 孔维梁 刘洪



目 次

结冰和防冰研究专栏(执行主编:陈勇,郝莲,李杰;策划编辑:王娇)

- 飞机过冷大水滴结冰气象条件运行设计挑战陈勇,孔维梁,刘洪(626973)
- 翼型结冰状态复杂分离流动数值模拟综述赵宾宾,张恒,李杰(627211)
- 翼面结冰过程中的冰晶运动相变与黏附特性马乙隼,柴得林,王强,易贤,孔满昭(627817)
- 结冰翼型前缘下垂变弯度容冰特性改善机制张恒,李杰,赵宾宾(627114)
- 大型客机增升构型缝翼除冰状态失速特性黄雄,曲仕茹,张恒,陈显调(627077)
- 结冰风洞过冷大水滴试验中混合翼设计束珺,徐东光,韩志熔,李斯,黄雄(627182)
- 短舱防冰系统三维内外流耦合计算方法郑梅,冯丽娟,秦娜,尹金鸽(627425)
- 一种基于水滴收集量代理模型的结冰试飞空域确定方法
.....牛俊杰,桑为民,李栋,郝莲,王泽林(627697)
- 复杂气象条件下考虑结冰风险的无人机飞行策略郭琪磊,桑为民,牛俊杰,袁烨(627518)
- 等离子体激励与电加热式防冰性能对比.....谢理科,梁华,吴云,方雨霖,魏彪,苏志,刘雪城,郑博睿(627971)
- 基于 POD 和代理模型的热气防冰性能预测方法杨倩,郭晓峰,李芹,董威(626992)

综 述

- 月球车地面遥操作技术发展现状与未来展望李卫华,郭军龙,丁亮,高海波(026333)

固体力学与飞行器总体设计

- 面向缺陷容忍的加筋筒壳快速优化设计马祥涛,王法垚,朱英杰,郝鹏,王博,刘观日(226430)
- 非参数化概率盒下随机与认知不确定性的分离式灵敏度分析
.....吴沐宸,陈江涛,夏侯唐凡,赵炜,刘宇(226658)

电子电气工程与控制

- 基于多尺度融合的自适应无人机目标跟踪算法薛远亮,金国栋,谭力宁,许剑锃(326107)
- 伸缩套臂式无人机空基回收建模与对接控制苏子康,徐忠楠,李春涛,陈海通,王宏伦(326315)
- 基于测地线距离的空间非合作目标点云配准陈斌,郝厚印,张晓东,罗敏,郭治栋(326336)
- 卫星网络动态资源图多QoS约束路由算法梁超,杨力,潘成胜,戚耀文(326422)
- 天基光学空间目标监测的初轨确定赵柯昕,甘庆波,刘静(326465)
- 低复杂度雷达嵌入式通信波形设计方法张澄安,李保国,王翔,徐强(326471)

材料工程与机械制造

- 复合材料薄板结构中的声学黑洞效应探究郑锋,黄薇,季宏丽,裘进浩(426453)
- 基于多模式超声成像的CFRP冲击损伤无损表征与冲击后压缩强度预测
-张伟,王彬文,樊俊铃,詹绍正,焦婷,杨宇(426635)

ACTA AERONAUTICA ET ASTRONAUTICA SINICA

(Semimonthly)

Volume 44 Number 1

15 Jan. 2023

CONTENTS

Special Topic of Icing and Anti-Icing Research

(Guest Editors: CHEN Yong, HAO Lian, LI Jie; Managing Editors: WANG Jiao)

- Challenge of aircraft design under operational conditions of supercooled large water droplet icing
.....CHEN Yong, KONG Weiliang, LIU Hong (626973)
- Review of numerical simulation on complex separated flow of iced airfoilZHAO Binbin, ZHANG Heng, LI Jie (627211)
- Phase change and adhesion characteristics of ice crystal movements in wing icing
.....MA Yijian, CHAI Delin, WANG Qiang, YI Xian, KONG Manzhao (627817)
- Improvement mechanism of ice-tolerance capacity for iced airfoil with variable camber of drooping leading edge
.....ZHANG Heng, LI Jie, ZHAO Binbin (627114)
- Stall performance of high-lift configuration of large civil aircraft with slat de-icing
.....HUANG Xiong, QU Shiru, ZHANG Heng, CHEN Xiantiao (627077)
- Hybrid wing design of icing wind tunnel supercooled large droplet icing test
.....SHU Jun, XU Dongguang, HAN Zhirong, LI Si, HUANG Xiong (627182)
- 3D computational method for conjugate heat transfer between internal and external flow of nacelle anti-icing system
.....ZHENG Mei, FENG Lijuan, QIN Na, YIN Jing (627425)
- Icing test flight area determination method based on surrogated model of water droplet collection
.....NIU Junjie, SANG Weimin, LI Dong, HAO Lian, WANG Zelin (627697)
- UAV flight strategy considering icing risk under complex meteorological conditions
.....GUO Qilei, SANG Weimin, NIU Junjie, YUAN Ye (627518)
- Comparison of anti-icing performance between plasma actuation and electric heating
.....XIE Like, LIANG Hua, WU Yun, FANG Yulin, WEI Biao, SU Zhi, LIU Xuecheng, ZHENG Borui (627971)
- Hot air anti-icing performance estimation method based on POD and surrogate model
.....YANG Qian, GUO Xiaofeng, LI Qin, DONG Wei (626992)

Reviews

- State of art and prospects of ground teleoperation technology for lunar rover
.....LI Weihua, GUO Junlong, DING Liang, GAO Haibo (026333)

Solid Mechanics and Vehicle Conceptual Design

- Accelerated optimization design of stiffened cylindrical shell for imperfection tolerance
.....MA Xiangtao, WANG Fayao, ZHU Yingjie, HAO Peng, WANG Bo, LIU Guanri (226430)

Separating sensitivity analysis of aleatory and epistemic uncertainties in non-parametric probability-box
.....WU Muchen, CHEN Jiangtao, XIAHOU Tangfan, ZHAO Wei, LIU Yu (226658)

Electronics and Electrical Engineering and Control

Adaptive UAV target tracking algorithm based on multi-scale fusion
.....XUE Yuanliang, JIN Guodong, TAN Lining, XU Jiankun (326107)
Modeling and docking control of UAV aerial recovery in form of telescopic boom
.....SU Zikang, XU Zhongnan, LI Chuntao, CHEN Haitong, WANG Honglun (326315)
Point cloud registration of space non-cooperative targets based on geodesic distance
.....CHEN Bin, XI Houyin, ZHANG Xiaodong, LUO Min, GUO Zhidong (326336)
Multi-QoS constraints routing algorithm based on satellite network dynamic resource graph
.....LIANG Chao, YANG Li, PAN Chengsheng, QI Yaowen (326422)
Initial orbit determination for space-based optical space surveillance.....ZHAO Kexin, GAN Qingbo, LIU Jing (326465)
Radar-embedded communication waveform design with low complexity
.....ZHANG Cheng'an, LI Baoguo, WANG Xiang, XU Qiang (326471)

Material Engineering and Mechanical Manufacturing

Acoustic black hole effect of composite sheet structuresZHENG Feng, HUANG Wei, JI Hongli, QIU Jinhao (426453)
Ultrasonic nondestructive characterization of impact damage and compression after impact for CFRP based on multi-mode imaging
.....ZHANG Wei, WANG Binwen, FAN Junling, ZHAN Shaozheng, JIAO Ting, YANG Yu (426635)