

中国科技核心期刊
中国航空学会会刊

ISSN 1671-654X
CN 61-1276/TP

航空计算技术

AERONAUTICAL COMPUTING TECHNIQUE

第43卷 第3期

Vol.43 No.3



中国航空工业集团公司主管
中航工业西安航空计算技术研究所主办

中国·西安

3
2013

目 次

计算方法

- 微型扑翼飞行器扑动机构相关研究进展 李洋,宋笔锋,王利光,等(1)
 基于 Volterra 捕食模型的飞行流量动态调配 郝中舟,张兆宁(5)
 加权梯度限制器在节点 DG 格式中的应用 刘逸鸥,杨永,张强(9)
 大展弦比机翼流固耦合迭代求解模拟 宗宁,杨广珺,吕胜利(13)
 气压垂直导航中修正高度分析 杨姝,刘志恒,朱代武,等(17)
 多机场终端区进场航班排序模型研究 张妍,胡明华,张颖(20)
 某型民机登机门功能危险性分析与故障树分析 李丹圆,冯蕴雯,薛小锋,等(25)
 拖靶系统挂机安装角度计算 田新峰,李世秋,朱文来(31)
 高保真气动伺服弹性系统降阶技术研究 张子健,刘斌(34)
 采用差错控制技术降低遥控指令差错率的算法 陈翔宇(39)
 基于 FLUENT 的不同喷管形状喷流噪声分析 蒋峰,马建敏(41)
 机身某部位连接区疲劳和损伤容限分析 苏毅,王生楠(45)
 基于区间分析法的防冰引气管路系统故障树分析 南华,刘永寿,张峰,等(48)
 紧固件连接部位热应力分析的理论算法 张肖肖,成竹,任青梅,等(52)
 动态自适应 GPS/INS 组合导航方法 张璐,杨功流,于沛,等(56)
 迎角快速校准及误差对控制系统的影响研究 李导,杨伟,李仙枝,等(59)
 无人机路径规划中的环境和威胁模型研究 高晓静,陈晓峰,智勇(63)
 一种无人机罗差修正方法 韩兰懿,米松林,潘建军,等(69)
 基于合作目标的三维空间贝叶斯传感器配准算法 李力超,史伟(73)
 湍流模型在民机跨声速绕流计算的应用 韩涛(76)
 三种增强复合材料层合板抗屈曲优化分析 庞华华,Guo Shijun(80)
 遮挡板参数对二元喷管气动和红外辐射影响 唐正府,王杏涛,单勇,等(85)

计 算 机 软 件

- 基于任务单元模型的研发流程验证 丁明,张军,朱沧,等(89)
 机载软件适航技术研究与工程应用 胡林平(92)
 综合模块化航电系统软件技术研究 李晓丹,殷永峰,张弛(96)
 GJB5000A 的过程和产品质量保证过程域研究 张臻鉴,毛佳,高柯(102)
 风切变规避导引系统的设计及适航取证研究 刘艳涛,周烨斐,张军才(105)
 基于 IDATA 的航空多功能显示器图形界面 许少尉,陈思宇(108)
 无人机地面控制站通用化软件架构 马聪颖,高瑞周,朱玉祜(112)

计 算 机 应 用

- 某机载计算机电磁辐射分析与抑制研究 宋晓南,王佳宁,潘旭(114)
 基于 PSO-GA 优化的 TOP-HAT 形态学滤波器及其应用 高德远,王建刚(119)
 平台式惯导仿真系统的设计与实现 于沛,杨功流,张璐,等(124)
 基于 Matlab 的永磁同步电机泵系统仿真与分析 习仁国,刘卫国,肖息,等(128)
 基于混合总线的 ATS 升级方法 崔强(131)

CONTENTS

Computing Method

Investigation of Flapping Mechanism for Flapping-wing Micro Aerial Vehicles	LI Yang, SONG Bi-feng, WANG Li-guang, et al (1)
Dynamic Adjusting of Flight Flow Based on Volterra Predator-prey Model	HAO Zhong-zhou, ZHANG Zhao-ning (5)
Application of Linear-weighted Gradient Limiter for Nodal Discontinuous Galerkin Method	LIU Yi-ou, YANG Yong, ZHANG Qiang (9)
Numerical Simulation of High-aspect Ratio Wing with Fluid Solid Coupling	ZONG Ning, YANG Guang-jun, LV Sheng-li (13)
Research on Altitude Correction in Barometric Vertical Navigation	YANG Shu, LIU Zhi-heng, ZHU Dai-wu, et al (17)
Sequencing and Scheduling Models for Arrival Aircrafts in Multi-airport Terminal Area	ZHANG Yan, HU Ming-hua, ZHANG Ying (20)
Functional Hazard and Fault Tree Analysis for Entry Door of Commercial Aircraft	LI Dan-yuan, FENG Yun-wen, XUE Xiao-feng, et al (25)
A Method for Fixing Angle of Towed Target System	TIAN Xin-feng, LI Shi-qiu, ZHU Wen-lai (31)
Investigation of Model Reduction for High-order Aeroviscoelasticity System	ZHANG Zi-jian, LIU Bin (34)
Algorithm of Adopting Error Control Technology Decrease Remote Command Error Rate	CHEN Xiang-yu (39)
Noise Analysis of Different Opening Nozzle Model Based on FLUENT	JIANG Feng, MA Jian-min (41)
Analysis of Fatigue and Damage Tolerance of Joint Region of Aircraft Certain Part	SU Yi, WANG Sheng-nan (45)
Fault Tree Analysis of Bleed Air Anti-icing Pipeline System Based on Interval Analysis Method	NAN Hua, LIU Yong-shou, ZHANG Feng, et al (48)
A Theoretical Algorithm of Thermal Stress Analysis of Mechanically Fastened Joints	ZHANG Xiao-xiao, CHENG Zhu, REN Qing-mei, et al (52)
Design of GPS/INS Integrated Navigation using Dynamic Adaptive Filter	ZHANG Lu, YANG Gong-liu, YU Pei, et al (56)
Study of Rapid Calibration of Angle of Attack and Impact of Error on Control System	LI Dao, YANG Wei, LI Xian-zhi, et al (59)
Study on Battlefield and Threat Modeling for UAV Path Planning	GAO Xiao-jing, CHEN Xiao-feng, ZHI Yong (63)
Method of Compass Correction of Certain UAS	HAN Lan-yi, MI Song-lin, PAN Jian-jun, et al (69)
Registration Algorithms of Bayes Sensor Based on Cooperative Targets in ECEF	LI Li-chao, SHI Wei (73)
Investigation on Different Turbulence Models in Transonic Flow of Civil Aircraft	HAN Tao (76)
Optimal Analyses of Three Types for Reinforced Composite Panels against Buckling	PANG Hua-hua, GUO Shijun (80)
Effects of Shelter Baffle Geometry Parameters on Aerodynamics and Infrared Radiation Characteristics for Two-dimensional Nozzle	TANG Zheng-fu, WANG Xing-tao, SHAN Yong, et al (85)

Computer Software

Verification of Research and Development Process Based on Task Unit Model	DING Ming, ZHANG Jun, ZHU Cang, et al (89)
Research and Practice in Avionic Software Airworthiness	HU Lin-ping (92)
Technical Research of Integrated Modular Avionics	LI Xiao-dan, YIN Yong-feng, ZHANG Chi (96)
Research on GJB5000A Process and Product Quality Assurance Process	ZHANG Zhen-jian, MAO Jia, GAO Ke (102)
Design and Airworthiness Certification of Windshear Escape Guidance System	LIU Yan-tao, ZHOU Ye-fei, ZHANG Jun-cai (105)
Aviation Multifunction Display Based on Idata	XU Shao-wei, CHEN Si-yu (108)
Universal Software Architecture for UAV Ground Control Stations	MA Ying-cong, GAO Rui-zhou, ZHU Yu-hu (112)

Computer Application

Research on Suppression of Electromagnetic Radiation of Certain Aviation Computer	SONG Xiao-nan, WANG Jia-ning, PAN Xu (114)
Optimal Top-Hat Morphological Filters Based on PSO-GA and Application	GAO De-yuan, WANG Jian-gang (119)
Design and Implementation of Platform-based INS Simulation System	YU Pei, YANG Gong-liu, ZHANG Lu, et al (124)
Simulation and Analysis of PMSM Motor-Pump System using Matlab	XI Ren-guo, LIU Wei-guo, XIAO Xi, et al (128)
ATS Improve Methods Based on Hybrid Bus	CUI Qiang (131)