

目 次

特约稿件

重复使用天地往返运输系统动力技术发展研究 谭永华,李平,杜飞平(1)

载人月面着陆上升技术

基于视觉的嫦娥四号探测器着陆点定位方法 王稼,万文辉,赵焕洲,王保丰,彭嫚,荣志飞(12)

嫦娥卫星数传副瓣信号的干涉测量研究与精度验证 任天鹏,谢剑锋,路伟涛,陈略,韩松涛(19)

基于同伦方法的地月系 L_2 点小推力转移轨道优化 潘迅,泮斌峰(25)

一种用于月面着陆的知识辅助单脉冲前视成像方法 陈洪猛,鲁耀兵,刘京,孙晗伟,易晓丽,穆贺强(31)

六支链轮腿式月面机器人机构优化设计 李聪,韩亮亮,袁帅,张元勋(37)

载人月面巡视器混合电源系统设计 曹哲,张雪怡(42)

微重力下热泵压缩机承载与润滑技术研究 牛春洋,李育隆,于新刚,王德伟,黄磊(50)

基于代谢模拟的环控生保系统性能试验方法研究 冯红旗,刘力涛,彭卓,杨京松,卞强,李森(56)

空间站运行控制任务规划体系方案研究 李剑,邹雪梅,王成(64)

自然对流对我国空间站地面热试验结果准确性的影响及修正 金宇,陈灵,李振宇,韩海鹰,曹剑峰(71)

基于双螺旋张拉整体式结构的空间可展舱段方案研究 钱成,朱伟伟,李丹,左易,杨林森,刘俊,陈粤海,郭宏伟(79)

基于 Kinect 的七自由度空间机械臂体感控制方法 张博文,黄攀峰,刘正雄(85)

基座弹性的双柔杆空间机器人的神经网络动态面控制 黄小琴,陈力(92)

舱外航天服-航天员下肢系统动力学建模与分析 林如海,谢晓梅,李钰新,李学生,王振伟,徐利梅,王枭(98)

电动泵压式液体火箭发动机系统建模与仿真 刘洋,付本帅,杨建刚,何国强,何渊博,刘佩进(107)

高密度固态储氢材料技术研究进展 张娜,陈红,马晓,申帅帅,王国文(116)

综述

2018 年国外载人航天发展综述 廖小刚,王岩松(122)

航天器非火工连接分离技术研究综述 仲作阳,张海联,周建平,黄奕勇(128)

MANNED SPACEFLIGHT

Vol.25 No.1 (Sum 87) 2019

CONTENTS

INVITED PAPER

- Research on Development of Propulsion Technology for Reusable Space Transportation System TAN Yonghua, LI Ping, DU Feiping(1)

MANNED LUNAR LANDING AND ASCENT TECHNOLOGY

- Vision-Based Positioning Method for Chang'E-4 Lander WANG Jia, WAN Wenhui, ZHAO Huanzhou, WANG Baofeng, PENG Man, RONG Zhifei(12)
Research on Interferometry of Data Transmission Sidelobe Signal of Chang'E Satellites and Its Accuracy Verification REN Tianpeng, XIE Jianfeng, LU Weitao, CHEN Lue, HAN Songtao(19)
Optimization of Low-Thrust Transfer to L_2 Libration Point Using Homotopy Method PAN Xun, PAN Bin Feng(25)
A Knowledge Aided Monopulse Forward-looking Imaging Algorithm for Lunar Landing CHEN Hongmeng, LU Yaobing, LIU Jing, SUN Hanwei, YI Xiaoli, MU Heqiang(31)
Optimization Design and Simulation of Six branched Wheel-Legged Robot LI Cong, HAN Liangliang, YUAN Shuai, ZHANG Yuanxun(37)
Design of Hybrid Power System for Manned Lunar Rover CAO Zhe, ZHANG Xueyi(42)
Research on Bearing and Lubrication Technology of Heat Pump Compressor under Microgravity NIU Chunyang, LI Yulong, YU Xingang, WANG Dewei, HUANG Lei(50)
Research on Experiment Methods for Performance of ECLSS Based on Metabolic Simulation FENG Hongqi, LIU Litao, PENG Zhuo, YANG Jingsong, BIAN Qiang, LI Sen(56)
Research on System Framework of Operation Control Mission Planning in Space Station LI Jian, ZOU Xuemei, WANG Cheng(64)
Effect of Natural Convection on Thermal Test Results of China Space Station and Its Correction Method JIN Yu, CHEN Ling, LI Zhenyu, HAN Haiying, CAO Jianfeng(71)
Research on Scheme of Space Displayable Cabin Based on Double-Helical Tension and Integral Structure QIAN Cheng, ZHU Weiwei, LI Dan, ZUO Yi, YANG Linsen, LIU Jun, CHEN Yuehai, GUO Hongwei(79)
Somatosensory Control Method of 7-DOF Space Manipulator Based on Kinect ZHANG Bowen, HUANG Panfeng, LIU Zhengxiong(85)
Neural Network Dynamic Surface Control of a Two-flexible-Link Space Robot with Elastic Base HUANG Xiaoqin, CHEN Li(92)
Dynamic Modeling and Analysis of Extravehicular Space Suit-Astronaut Lower Limb System LIN Ruhai, XIE Xiaomei, LI Yuxin, LI Xuesheng, WANG Zhenwei, XU Limei, WANG Xiao(98)
System Modeling and Simulation of Electric Pump Feed Liquid Propellant Rocket Engine LIU Yang, FU Benshuai, YANG Jiangang, HE Guoqiang, HE Yuanbo, LIU Peijin(107)
Research Progress of High Density Solid-state Hydrogen Storage Materials ZHANG Na, CHEN Hong, MA Xiao, SHEN Shuaishuai, WANG Guowen(116)

REVIEW

- Review of Human Spaceflight Development Abroad in 2018 LIAO Xiaogang, WANG Yansong(122)
Review of Non-pyrotechnic Connection and Separation Technology of Spacecraft ZHONG Zuoyang, ZHANG Hailian, ZHOU Jianping, HUANG Yiyong(128)