

目次

高端论坛

- 未来月球探测总体构想 侯建文,赵晨,常立平,陈辉,钱海鹏(425)
- 空间机械臂技术发展综述 刘宏,蒋再男,刘业超(435)

工程技术

- 载人飞船返回舱气囊缓冲多目标优化设计 梅昌明,张进,潘刚,唐国金(444)
- 空间站转位组建方案研究 沈晓鹏,刘艳,胡雪平,耿海峰,魏智,陈宝东(450)
- 基于预显示的大时延遥操作交会相平面控制 李涛,张波,李海阳(456)
- 弱撞击式对接机构力传递及运动性能分析与优化 张玲瑄,邵济明,邹怀武,张崇峰(462)
- 载人飞船自主应急返回着陆区适应能力分析 李九人,林西强,李英良,张海联(468)
- 可移动式月球着陆器在载人月球探测活动中的任务分析

- 梁鲁,张志贤,果琳丽,杨晨,曾曜,李民,叶培建(472)

- 模拟月尘胶结质材料研制 孙浩,沈志刚,张晓静,麻树林(479)
- 一种空间吸附式爬行机器人设计及其步态规划 唐玲,袁宝峰,王耀兵,危清清(486)
- 一种航天员舱外活动用脚限位器的设计与分析 王炜,陶建国,孙浩(492)
- 空间大功率长寿命滚环电传输装置技术研究 李兆,钱志源,王治易,赵万华(498)

基础研究

- 空间碎片防护问题的物质点无网格法与软件系统
- 刘岩,张雄,刘平,廉艳平,马上,官伟伟,王汉奎(503)
- 面向出舱活动的典型功能操作肌肉激活预测 王晓东,王政,李昊,李凡,刘志臻,王春慧(510)
- 基于交替迭代的深空天线阵布局优化算法 夏双志,徐秀成,郭肃丽,耿虎军(516)
- 主动隔振系统激励器电流分配优化设计 刘伟,董文博,李宗峰,彭超(522)

信息研究

- NASA 载人航天传播与教育研究 张智慧,张玉梅,刘爽,刘映国,王岩松(530)

MANNED SPACEFLIGHT

Vol. 21 No. 5 (Sum 67) 2015

CONTENTS

TOP FORUM

- General Conception of Future Lunar Exploration
..... *HOU Jianwen, ZHAO Chen, CHANG Liping, CHEN Hui, QIAN Haipeng* (425)
Review of Space Manipulator Technology *LIU Hong, JIANG Zainan, LIU Yechao* (435)

ENGINEERING TECHNOLOGY

- Multi-objective Optimization Design of Airbag Buffer in Return Capsule of Manned Spaceship
..... *MEI Changming, ZHANG Jin, PAN Gang, TANG Guojin* (444)
Study on Transfer Construction Scheme of Space Station
..... *SHEN Xiaopeng, LIU Yan, HU Xueping, GENG Haifeng, WEI Zhi, CHEN Baodong* (450)
Phase Plane Control of Teleoperation Rendezvous with Large Time Delay Based on Predictive Display
..... *LI Tao, ZHANG Bo, LI Haiyang* (456)
Analysis and Optimization of Mechanical and Kinematic Performance in Low Impact Docking Mechanism ...
..... *ZHANG Lingxuan, SHAO Jiming, ZOU Huaiwu, ZHANG Chongfeng* (462)
Adaptability Analysis Emergency Landing Site for Manned Spacecraft
..... *LI Jiuren, LIN Xiqiang, LI Yingliang, ZHANG Hailian* (468)
Task Analysis of Mobile Lunar Lander in Crewed Lunar Exploration Missions
..... *LIANG Lu, ZHANG Zhixian, GUO Linli, YANG Chen, ZENG Yao, LI Min, YE Peijian* (472)
Development of Lunar Agglutinate Analog for High-fidelity Lunar Dust Simulant
..... *SUN Hao, SHEN Zhigang, ZHANG Xiaojing, MA Shulin* (479)
Design and Gait Planning of a Space Adhesion-type Climbing Robot
..... *TANG Ling, YUAN Baofeng, WANG Yaobing, WEI Qingqing* (486)
Design and Simulation Analysis of a Foot Restraint for Astronaut EVA
..... *WANG Wei, TAO Jianguo, SUN Hao* (492)
Research on High-power and Long-life Roll Ring for Electric Transmission in Space
..... *LI Zhao, QIAN Zhiyuan, WANG Zhiyi, ZHAO Wanhua* (498)

BASIC RESEARCH

- Meshfree Material Point Method and Software System for Problems of Shielding Space Debris
..... *LIU Yan, ZHANG Xiong, LIU Ping, LIAN Yanping, MA Shang, GONG Weiwei, WANG Hankui* (503)
Predicting Muscle Activation in Typical Functional Tasks of EVA
..... *WANG Xiaodong, WANG Zheng, LI Hao, LI Fan, LIU Zhizhen, WANG Chunhui* (510)
Optimizing Algorithm for Deep Space Antenna Array Configuration Based on Alternate Iteration
..... *XIA Shuangzhi, XU Xiucheng, GUO Suli, GENG Hujun* (516)
Optimal Design of Current Distribution in Actuators in Active Vibration Isolation System
..... *LIU Wei, DONG Wenbo, LI Zongfeng, PENG Chao* (522)

INFORMATION RESEARCH

- Research on NASA's Manned Space Communication and Education
..... *ZHANG Zhihui, LIU Yumei, LIU Shuang, LIU Yingguo, WANG Yansong* (530)