

ISSN 1001-3563
CN 50-1094/TB

全 国 中 文 核 心 期 刊

2021年12月 第42卷 第24期

主管单位：中国兵器装备集团有限公司
主办单位：中国兵器工业第五九研究所

包装工程

Packaging Engineering

群智创新与设计

万万数据

包装工程

第四十二卷 第二十四期

二〇二一年十二月(下半月)

包装工程

Packaging Engineering

第42卷(卷终) 第24期 2021年12月20日

目次

专题：群智创新与设计

- 创意设计众包研究综述 刘征, 朱梓乔, 卢凯迪 1
- 群智项目创新潜力的影响因素研究 石丽雯, 郭伟, 张静, 刘金剑 13
- 基于群智感知的正念隐式社交交互系统设计 朱媛, 项雯茜 22
- 面向群智共创的用户多模态信息设计 张祖耀, 王碧凌, 摇若楷 29
- 基于群智设计思维的“健康码”系统设计研究 王珂, 董霖, 张犁 36

特别策划

- 不确定视角下产品结构性能优化设计综述与展望 冯毅雄, 洪兆溪, 李中凯, 胡炳涛, 邱皓, 张志峰, 郑浩, 谭建荣 45
- 智能信息时代下装备制造领域的中国式转型升级 陈国强, 张芳兰, 徐丽, 申正义 60
- 基于知识图谱的情境感知交互设计研究综述 王伟伟, 魏婷, 余隋怀 73

工业设计

- 老年人心智模型研究及在交互设计领域的应用 宫晓东, 张佳乐, 陈立翰 84
- 蒙古族游牧居住文化原型数据库架构设计与应用 赵云彦 93
- 国内心理健康类APP的可用性研究 李商, 史文静, 王静, 邓超琼, 廖铭璐, 张雪琴 102
- 移动端单词学习应用的游戏化设计研究 许扬洋, 郑先隽, 张学民 113
- 基于情境感知的户外运动类应用设计策略研究 岳耀华, 蒋晓, 吴智艳 121
- 基于数据驱动的用户需求智能获取方法研究 曹家港, 刘键, 徐悬 129
- 基于服务蓝图的文创产品用户体验设计研究及实践 姚湘, 颜祺芳, 刘俊 140
- 包装打开过程中知觉流畅性对用户情感体验影响研究 王新燕, 范大伟 147
- 基于层次分析和加权灰色关联分析的真无线耳机适配度评价 刘永红, 严妍, 王海宁 153
- 基于用户感知的工程机械造型评价研究 易军, 李雪 161
- 基于网络评论情感分析和QFD的产品改进设计 王琴, 刘毅 169
- 老龄服务机器人色彩设计的视觉认知绩效研究 王秋惠, 陈徽 175
- 基于系统动力学的服务设计优化方法研究 张家祺, 叶梦舟, 张翀 181

XR扩展现实在大学生创新创业路演中的应用研究	马寰	191
促进运动动机的PBL游戏化设计实证研究	杨明衡, 姚洁, 肖韬	198
面向青年不同体型人群的床垫软硬度设计研究	堵梦丽, 申黎明, 谈立山, 汪洋	207

视觉传达设计

交互界面的形式解析	邓明, 杨森, 孙鸣	215
社会创新设计研究进展可视化分析	江雨豪, 陈永康, 何人可	222
基于照明及眼动实验的冰箱操作界面优化设计	田琦, 吕淑然	230
四季联想与治愈系色彩的智能生成	周丰, 姚子颖, 姜鑫玉, 唐思帆, 王海霞	237
标点符号在中文排版中的处理及与字体设计的关系	陈嵘, 艾婧	244
宋刻本版式设计的用尺标准	孙琬淑	251
基于通用设计理论的红绿色盲包装配色方案探究	刘虹	259
品牌设计下的表情符号IP化应用研究	冯一, 李敬师, 王丽梅	266

高校设计研讨

赣傩面具文化因子提取及应用	赵勤, 回璇	272
湘西苗族蜡染中具身知识引入产品设计的途径	秦臻, 季铁, 刘永红	279
《闲情偶寄》造物观中的“趣味”美学解读	王敏, 徐征, 杨先艺	286
楚漆器造物艺术当代设计转化策略研究	汪笑楠, 徐征	292
甘孜藏族地域文化在旅游产品设计中的应用	张为珍, 李运璋, 方强, 金铭, 李晓锋	299
新媒体交互语境下的传统工艺文创推广探究	王建罡, 郑勇, 王宁	306
中国高校文创产品设计创新研究	杨欣欣, 高长春, 崔玉梅	314
畚族文化元素在文创产品设计中的应用研究	马宏儒, 郑林禄	321
设计赋能汨罗市文化旅游产业的理论与路径	山娜, 兰翠芹	327
数字技术推动认知转变的设计研究	陈炬, 何晓佑	333
人工智能背景下设计师能力需求及胜任力模型再建构	侯建军, 毛轶超, 许莉钧	340
古代榻炕用靠背的设计研究与创新	申明倩, 周焘	349
朝鲜族餐饮空间家具设计与应用	吕光	355
基于情感共生理念的宠物清洁产品创新设计	徐睿婧	362
基于服务剧场模型的社区文体设施服务设计研究	程希	368
乡村生活设施产品的易用性设计	孙秀丽, 郭潇, 马春东	376
基于使用者角度的旅游乡村公共设施优化研究	王馨曼, 杜守帅	382
基于智能化趋势的工程机械界面设计研究	张伟, 张睿瑞, 朱春潮, 舒余安	389
基于眼动分析的白酒外包装导向设计的差异化体现	徐刚, 张玲玉, 李诗玥, 魏巍	394

信息索引

《群智创新与设计》专题主编、序言介绍	
特别策划《不确定视角下产品结构性能优化设计综述与展望》作者、序言介绍	
特别策划《智能信息时代下装备制造领域的中国式转型升级》作者、序言介绍	
特别策划《基于知识图谱的情境感知交互设计研究综述》作者、序言介绍	

PACKAGING ENGINEERING

(Initial Issue 1980) (Semimonthly) Vol.42 (The End of Vol) No.24 (Total No.462) Dec.20, 2021

Contents

Special Subject: Crowd Intelligence Innovation and Design

- Review of Crowdsourcing on Creative Design
LIU Zheng, ZHU Zi-qiao, LU Kai-di 1
- Factors Impacting Innovation Potential in Crowd Intelligence Project
SHI Li-wen, GUO Wei, ZHANG Jing, LIU Jin-jian 13
- Design of an Implicit Social Interaction System for Mindfulness Based on Crowd Sensing
ZHU Yuan, XIANG Wen-xi 22
- The User Multi-modal Information Design for Group Intelligence Co-creation
ZHANG Zu-yao, WANG Bi-ling, YAO Ruo-kai 29
- “Health Code” System Design Study Based on Crowd Intelligence Design Thought
WANG Ke, DONG Lin, ZHANG Li 36

Special Planning

- Review and Prospect of Product Structural Performance Optimization Design from the Perspective of Uncertainty
FENG Yi-xiong, HONG Zhao-xi, LI Zhong-kai, HU Bing-tao, QIU Hao, ZHANG Zhi-feng, ZHENG Hao, TAN Jian-rong 45
- Chinese-style Transformation and Upgrading of Equipment Manufacturing Field in the Intelligent Information Age
CHEN Guo-qiang, ZHANG Fang-lan, XU Li, SHEN Zheng-yi 60
- Review of Context Awareness Interaction Design Based on Knowledge Mapping
WANG Wei-wei, WEI Ting, YU Sui-huai 73

Industrial Design

- Mental Model for the Elderly and Its Application in the Field of Interaction Design
GONG Xiao-dong, ZHANG Jia-le, CHEN Li-han 84
- Design and Application of Prototype Database Architecture of Mongolian Nomadic Residential Culture
ZHAO Yun-yan 93
- Usability of Domestic Mental Health APP
LI Shang, SHI Wen-jing, WANG Jing, DENG Chao-qiong, LIAO Ming-lu, ZHANG Xue-qin 102
- Exploring Gamification Design on Mobile Vocabulary Learning Application
XU Yang-yang, ZHENG Xian-jun, ZHANG Xue-min 113
- Application Design Strategy of Outdoor Sports Based on the Context-Aware
YUE Yao-hua, JIANG Xiao, WU Zhi-yan 121
- Intelligent Acquisition Method of User Requirements Based on Data Driven
CAO Jia-gang, LIU Jian, XU Xuan 129
- Research and Practice on User Experience Design of Cultural and Creative Products Based on Service Blueprint
YAO Xiang, YAN Qi-fang, LIU Jun 140
- Influence of Perceptual Fluency on the Difference in the Emotion Experience of Users during Unpacking
WANG Xin-yan, FAN Da-wei 147
- True Wireless Stereo Earphone Fit Design Based on Analytic Hierarchy Process and Grey Relational Analysis
LIU Yong-hong, YAN Yan, WANG Hai-ning 153
- Engineering Machinery Modeling Evaluation Based on User Perception
YI Jun, LI Xue 161
- Product Improvement Design Based on Sentiment Analysis of Online Reviews and QFD
WANG Qin, LIU Yi 169
- Visual Cognitive Performance of Color Design of Service Robot for the Elderly
WANG Qiu-hui, CHEN Wei 175
- Service Design Optimization Method Based on System Dynamics
ZHANG Jia-qi, YE Meng-zhou, ZHANG Chong 181
- Application Research of XR Extended Reality in College Students' Innovation and Entrepreneurship Road Show
MA Huan 191
- An Empirical Study on PBL Gamification Design for Exercising Motivation
YANG Ming-heng, YAO Jie, XIAO Tao 198

Design of Mattress Hardness for Young People with Different Body Types
DU Meng-li, SHEN Li-ming, TAN Li-shan, WANG Yang 207

Visual Communication Design

- Analysis of the Form of Interactive Interface
DENG Ming, YANG Sen, SUN Ming 215
- Analysis on the Research Progress of Social Innovation Design
JIANG Yu-hao, CHEN Yong-kang, HE Ren-ke 222
- Optimal Design of Refrigerator Operation Interface Based on Lighting and Eye Movement Experiments
TIAN Qi, LYU Shu-ran 230
- Association of Four Seasons and Intelligent Generation of Healing Colors
ZHOU Feng, YAO Zi-ying, JIANG Xin-yu, TANG Si-fan, WANG Hai-xia 237
- On the Treatment of Punctuation in Chinese Typesetting and Its Relationship with Type Design
CHEN Rong, AI Jing 244
- The Ruler Standard in Layout Paradigm Design of Song Dynasty Block Printed Edition
SUN Wan-shu 251
- Red Green Color Blind Packaging Color Scheme Based on General Design Theory
LIU Hong 259
- IP Application of Emoji under Brand Design
FENG Yi, LI Jing-shi, WANG Li-mei 266

Study of College Design

- Extraction and Application of Cultural Factors of Gannuo Mask
ZHAO Qin, HUI Xuan 272
- The Path of Introducing Embodied Knowledge into Product Design of Miao Batik in Western Hunan
QIN Zhen, JI Tie, LIU Yong-hong 279
- Interpretation of "Taste" Aesthetic in the Creation View of "Xian Qing Ou Ji"
WANG Min, XU Zheng, YANG Xian-yi 286
- Strategy of Contemporary Design Transformation of Chu Lacquerware Creation Art
WANG Xiao-nan, XU Zheng 292
- Application of Ganzi Tibetan Regional Culture in Tourism Product Design
ZHANG Wei-zhen, LI Yun-zhang, FANG Qiang, JIN Ming, LI Xiao-feng 299
- Promotion of Traditional Arts and Crafts Cultural Creation in the Context of New Media Interaction
WANG Jian-gang, ZHENG Yong, WANG Ning 306
- Design Innovation of Cultural and Creative Products in Chinese Universities
YANG Xin-xin, GAO Chang-chun, CUI Yu-mei 314
- Application of She Nationality Cultural Elements in the Design of Cultural and Creative Products
MA Hong-ru, ZHENG Lin-lu 321
- Theory and Path of Design Enabling the Cultural Tourism Industry in Miluo City
SHAN Na, LAN Cui-qin 327
- Design Research on Digital Technology Promoting Cognitive Transformation
CHEN Ju, HE Xiao-you 333
- Requirements Ability of Designers and Reconstruct the Designers Competency Model under the Background of Artificial Intelligence
HOU Jian-jun, MAO Yi-chao, XU Li-jun 340
- Design Research and Innovation of the Backrest of Ancient Couch and Kang
SHEN Ming-qian, ZHOU Tao 349
- Furniture Design and Application in Korean Catering Space
LYU Guang 355
- Innovative Design of Pet Cleaning Products Based on the Concept of Emotional Symbiosis
XU Rui-jing 362
- Service Design of Community Fitness and Recreational Facilities Based on Service Theater Framework
CHENG Xi 368
- The Usability Design of Rural Living Facility Products
SUN Xiu-li, GUO Xiao, MA Chun-dong 376
- Optimization of Tourism and Rural Public Facilities Based on User Perspective
WANG Xin-man, DU Shou-shuai 382
- Interface Design of Construction Machinery Based on Intelligent Trend
ZHANG Wei, ZHANG Rui-rui, ZHU Chun-chao, SHU Yu-an 389
- Differentiation of Liquor Packaging Design Based on Eye Movement Analysis
XU Gang, ZHANG Ling-yu, LI Shi-yue, WEI Wei 394