

ISSN 1672-6944
CN 32-1675/TN



全民阅读 核心期刊

中国核心期刊（遴选）期刊
江苏省一级期刊
中国学术期刊网络出版总库（中国知网）全文收录
万方数据-数字化期刊群全文收录
中文科技期刊数据库（维普网）全文收录

无线互联科技

WIRELESS INTERNET TECHNOLOGY

主管：江苏省科学技术厅
主办：江苏省科学技术情报研究所

2019年6月 第12期 第16卷
No.12 Vol.16

ISSN 1672-6944



万方数据

2019 12

无线互联科技

第十二期

二〇一九年六月

无线互联科技 WUXIAN HULIAN KEJI

2004年创刊
2019年第12期
(总第160期)
第16卷
半月刊
2019年6月25日

主 管: 江苏省科学技术厅

主 办: 江苏省科学技术情报研究所

编辑出版: 《无线互联科技》杂志社

社 长: 李 敏

副社长: 李克贵

主 编: 严文强

副主编: 汤 溟 刘 鉴

编辑部主任: 姚 鑫

主 任 编 辑: 顾培培

编 委: (按姓氏笔画为序)

王志功 王文鼎

陈如山 钱学荣

徐平平 黄凤义

目 次

通信观察

- | | |
|------------------------|-----------------|
| 1 湖北卫星地球站现状与发展对策分析 | 陈 思 刘智宇 |
| 3 即时通信技术在犯罪侦查取证中的应用研究 | 王佳慧 刘继红 |
| 5 电子通信设备的接地技术研究 | 刘晓建 |
| 7 基于移动通信技术的5G时代核心网架构研究 | 石丽梅 朱又敏 郑 颖 谭艳春 |

无线天地

- | | |
|-----------------------------|---------|
| 9 基于区块链技术的医疗信息互联互通应用分析 | 李星霖 李 兵 |
| 11 一种多极化天线的设计 | 林周福 |
| 13 基于无源波分复用的5G前传扩芯方案 | 苏 毅 冯邦宇 |
| 15 基于中国移动物联网云平台实现PLC远程监控 | 陈良波 |
| 17 基于Linux的无线物联QR二维码物品清点器研制 | 李 玉 杨永刚 |

网络地带

- | | |
|-------------------------|---------|
| 19 经济和定价模型在云网络资源管理中的应用 | 董春利 王 莉 |
| 21 OTN网络优化方案研究 | 付克胜 胡 丹 |
| 23 大数据背景下人工智能在计算机网络中的应用 | 李帷笏 |
| 25 信息系统建设中的网络安全策略分析 | 魏继华 |
| 27 计算机虚拟网络路由的交换机制研究 | 李 斯 |
| 29 气象信息网络安全策略及技术分析 | 曹龙全 |
| 31 计算机网络信息安全防护研究 | 唐绘蓝 |

软件透视

- | | |
|--------------------------|-----------------|
| 33 Arcgis软件在城市规划现状分析中的应用 | 陆昶丽 |
| 36 国内外城市停车系统相关策略分析与研究 | 邹 涛 梁 彪 |
| 40 企业信息系统成功实施的关键问题分析 | 杜香和 |
| 43 基于项目管理角度的软件测试流程及管理 | 李功飞 |
| 45 软件项目管理中的进度控制问题及对策分析 | 吕景丽 |
| 47 基于物联网技术的家庭农场监控管理系统研究 | 楼 彬 陈 晨 王记彩 沈焱鑫 |

设计分析

- | | |
|--------------------------|---------------------|
| 49 基于Zemax的牛顿式望远镜设计 | 朱孝辉 |
| 52 基于凸轮机械手的自动网球拾取机器人设计 | 郭天宇 艾文浩 孙长富 孙建荣 王桂超 |
| 55 基于Multisim的LC整流滤波电路分析 | 钟 俊 刘 辉 刘 恒 |
| 57 基于VC的传输文件集成软件的设计与实现 | 周 超 刘传琦 |
| 60 一种基于有源子阵的车载天线系统结构设计 | 李润生 |
| 62 电子设备电磁屏蔽的结构设计 | 梁建长 |
| 64 通航产业中航空情报发展策略分析 | 朱 珺 |

数字教育

- | | |
|---------------------------------|---------------------|
| 66 实现对教育课件关键信息的提取——以“数据库原理”课程为例 | 谢志庆 张晓天 闫秋艳 胡 妍 高淑娟 |
| 70 基于翻转课堂的混合式教学在“数字电子技术”课程中的应用 | 张红霞 齐晓娜 |

- 72 信息化背景下高职艺术设计类专业课程教学研究
——以基于VR技术的商业空间设计为例 孙 淦
- 75 基于FPGA的“数字电子技术”教学改革研究 李宏杰 段德功
- 78 碎片化学习在大学在线课程中的应用原则 李冬莲
- 81 “程序设计(上机)”实践教学研究 梁雅丽
- 83 “新工科”背景下地方本科高校计算机科学与技术专业转型策略思考
张 瑞 舒 虹
- 86 “自动控制理论”精品视频公开课的建设与思考
夏百花 袁宝红 吴海燕
- 88 “汽车单片机及局域网技术”教学改革与实践 刘 晨 崔 斌
- 90 信息技术与计算机课建设的有效结合研究 田丽娜
- 92 基于SPOC下翻转课堂混合式教学的实践分析 邓丽君
- 94 基于计算思维的“信息技术”课程教学研究 黄 强
- 96 “互联网+工程造价”课程评价考核平台及发展策略研究
朱琳琳 王艳玉 马 明
- 98 以就业为导向的“一技三对接”高职院校机电专业人才培养模式研究
王攀攀 毕玉珊 曹爱萍
- 100 微课在环境工程技术专业实训中的应用 郭振华 王 丹
- 102 多媒体技术在计算机教学应用中存在的问题及其对策分析 邵夫林

实验研究

- 104 家庭医生签约服务与社区养老相融合的创新性医养模式研究
与系统构建 张宇萱 余侃侃 朱陈伟 江 楠
- 108 基于关联规则的职业定位推理算法研究 金 晖 谭文斌
- 110 基于ECC算法在数字签名中的分析与研究 李 雨 张 俊
- 112 一种最优相似度的公共序列研究 武明超 崔晓兵 姚 欣 邵咏慧
- 114 计算机辅助工业设计发展的状况和趋势研究 刘友江
- 116 开放式计算机基础虚拟仿真实验室研究 詹春娥
- 118 故障诊断专家系统的应用研究 闫慧敏
- 120 环境空气质量自动监测系统建设研究 曾 毅 王玉萍
- 122 “互联网+保险”智慧化发展的模式与实践研究 孙 捷
- 124 Pioneer-Climax物种模型的动态分歧 王江岑
- 126 我国公共部门大数据应用研究——基于CSSCI的知识图谱分析 吴官政

技术应用

- 129 RFID技术在高校实验室设备管理中的应用 李 伟 南 江 罗廷芳
- 132 Cisco Packet Tracer在计算机网络教学中的应用研究
刘艳军 杜 颖 李晓会
- 135 属性基加密算法在云计算中的应用 薛力坤
- 137 计算机信息管理技术在维护网络安全中的应用 董 卉
- 139 基于5G关键技术的应用场景及发展研究 赵 丽
- 141 MEMS传感器技术数字式倾角仪的设计应用 王伟超
- 143 Hi3559A在视频结构化平台中的应用 张泽致 谭大伦 王冬海
- 145 基于图像处理技术的静脉穿刺机器人技术研究 彭丽霞
- 147 采用Patentics的不同检索字段进行人工干预的检索应用 丁 冉
- 149 基于Ansoft在“电机学”课程教学中应用 杨国龙
- 152 城乡教育信息化空间差异性分析 黄永仙 段 芳 舒 茜
- 154 “互联网+”背景下高校创新创业课程教学重构研究 段 芳 黄永仙
- 156 基于Arduino的轮椅式上肢康复训练系统的设计与开发 汤 玄
- 158 西藏民族文化对我国动画的影响研究 曹瑞雪 杨晓波
- 161 通信运营商精细化营销分析 梁淑琴
- 163 高职院校思想政治教育理论课程创新研究 孙 娟
- 165 基于互联网技术的音乐教学研究 原淑慧
- 167 中小学创客教育混合式学习模式设计与开发 王培静 熊华珍

中国标准连 ISSN 1672-6944
续出版物号: CN 32-1675/TN

邮发代号: 28-473

发行范围: 公开

发 行: 江苏省报刊发行局
南京市建邺区善修文化传播中心

账 号: 10354000000560379

开 户 行: 华夏银行南京城西支行

印 刷: 南京孚嘉印刷有限公司

定 价: 40.00元

《无线互联科技》杂志社

社 址: 江苏省南京市龙蟠路171号

电 话: (025)-85410367

(025)-85410361

(025)-85433097

(025)-85434985

邮 编: 210042

网 址: www.sti.js.cn

www.wxhlkj.net

邮 箱: hlkj@sti.js.cn

wxhlkj@163.com

咨询QQ: 171020757

户 名: 江苏省科学技术情报研究所

账 号: 4301012509001028301

开 户 行: 工商银行南京市板仓支行

WIRELESS INTERNET TECHNOLOGY

No.12 2019 (Total No.160)

CONTENTS

Analysis of the present situation and development countermeasures of the satellite earth station in Hubei province	Chen Si, Liu Zhiyu (1)
Research on the application of instant communication technology in criminal investigation and evidence collection	Wang Jiahui, Liu Jihong (3)
Research on grounding technology of electronic communication equipment.	Liu Xiaojian (5)
Research on core network architecture in 5G era	Shi Limei, Zhu Youmin, Zheng Ying, Tan Yanchun (7)
Application and analysis of medical information interconnection based on block chain technology	Li Xinglin, Li Bing (9)
Design of a multipolarization antenna	Lin Zhoufu (11)
Passive wavelength division multiplexing based on 5G front haul core expansion scheme	Su Yi, Feng Bangyu (13)
Remote monitoring of PLC based on China mobile Internet of Things cloud platform	Chen Liangbo (15)
Development of wireless IoT QR code item inventor based on Linux	Li Yu, Yang Yonggang (17)
Application of economics and pricing models of resource management in cloud networking	Dong Chunli, Wang Li (19)
Research on optimization scheme of OTN network	Fu Kesheng, Hu Dan (21)
Application of artificial intelligence in the computer network under the background of big data	Li Weijia (23)
Analysis on the network security strategy in the construction of information system	Wei Jihua (25)
Research on switching mechanism of computer virtual network routing	Li Si (27)
Analysis on meteorological information network security strategy and technology	Cao Longquan (29)
Study on computer network information security protection	Tang Huilan (31)
Application of Arcgis software in the analysis of current situation of urban planning	Lu Yili (33)
Analysis and research on relevant strategies of urban parking system at home and abroad	Zou Tao, Liang Biao (36)
Analysis on key problems in successful implementation of enterprise information system	Du Xianghe (40)
Software test flow and management based on project management	Li Gongfei (43)
Analysis of progress control problems and countermeasures in software project management	Lyu Jingli (45)
Research of family farm monitoring and management system based on Internet of Things technology	Lou Bin, Chen Chen, Wang Jicai, Shen Yanxin (47)
Design of Newton-type telescope based on Zemax	Zhu Xiaohui (49)
Design of automatic tennis pickup robot based on cam manipulator····	Guo Tianyu, Ai Wenhao, Sun Changfu, Sun Jianrong, Wang Guichao (52)
Analysis of LC rectifier and filter circuit based on multisim	Zhong Jun, Liu Hui, Liu Heng (55)
Design and implementation of transmission file integration software based on VC	Zhou Chao, Liu Chuanqi (57)
Vehicle-mounted antenna system based on active sub-array architectural design	Li Runsheng (60)
Structure design of electromagnetic shielding for electronic equipment	Liang Jianzhang (62)
Analysis on the development strategy of aviation information in navigation industry	Zhu Jun (64)
Realization of the key information of the education courseware: taking the “Database Principle” course as an example	Xie Zhiqing, Zhang Xiaotian, Yan Qiuyan, Hu Yan, Gao Shujuan (66)
Application of mixed teaching based on reverse classroom in “Digital Electronic Technology” course	Zhang Hongxia, Qi Xiaona (70)
Research on the course teaching of art and design specialty in higher vocational education under the background of informatization: taking the design of commercial space based on VR technology as an example	Sun Gan (72)
Research on teaching reform of “Digital Electronic Technology” based on FPGA	Li Hongjie, Duan Degong (75)
Applied principles of fragmented learning for college online courses	Li Donglian (78)
Research on practical teaching of “Programming (Computer) ”	Liang Yali (81)

Thoughts on the transformation strategy of computer science and technology specialty of local undergraduate colleges and universities under the background of “New Engineering”	Zhang Rui, Shu Hong (83)
Construction and consideration on the “Automatic Control Theory” competitive video open course	Xia Baihua, Yuan Baohong, Wu Haiyan (86)
Teaching reform and practice of “Automobile Single Chip Microcomputer and Local Area Network Technology”	Liu Chen, Cui Bin (88)
Study on effective combination of information technology and computer gold course construction	Tian Lina (90)
Practical analysis of mixed teaching in flipping classroom based on SPOC	Deng Lijun (92)
Research on teaching of “Information Technology” course based on computing thinking.....	Huang Qiang (94)
Research on evaluation platform and development strategy of “Internet +Project Cost” course	Zhu Linlin, Wang Yanyu, Ma Ming (96)
Analysis on “one-skill-three-docking” training model for electromechanical specialty in higher vocational colleges with the guidance of employment	Wang Panpan, Bi Yushan, Cao Aiping (98)
Application of micro-course in the practical training of environmental engineering	Guo Zhenhua, Wang Dan (100)
Analysis on the problems and countermeasures of the application of multimedia technology in computer teaching	Shao Fulin (102)
Research and system construction of innovative medical care model integrating family doctor contract service and community old-age care	Zhang Yuxuan, She Kankan, Zhu Chenwei, Jiang Nan (104)
Research on reasoning algorithms of professional location based on association rules	Jin Hui, Tan Wenbin (108)
Analysis and research of digital signature based on ECC algorithm	Li Yu, Zhang Jun (110)
Research on a common sequence with optimal similarity	Wu Mingchao, Cui Xiaobing, Yao Xin, Shao Yonghui (112)
Status and trend of computer-aided industrial design development	Liu Youjiang (114)
Research on virtual simulation laboratory for open computer foundation	Zhan Chun’e (116)
Research on application of fault diagnosis expert system	Yan Huimin (118)
Research on the construction of environmental air quality automatic monitoring system	Zeng Yi, Wang Yuping (120)
Study on the model and practice of intelligent development of “Internet +insurance”	Sun Jie (122)
Dynamic bifurcation of Pioneer-Climax species model	Wang Jiangcen (124)
Study on the application of big data in public sector in China: knowledge graph analysis based on CSSCI	Wu Guanzheng (126)
Application of RFID technology in the college equipment of laboratory management	Li Wei, Nan Jiang, Luo Tingfang (129)
Research on application of Cisco Packet Tracer in computer network teaching	Liu Yanjun, Du Ying, Li Xiaohui (132)
Application of attribute-based encryption algorithm in cloud computing.....	Xue Likun (135)
Application strategy of computer information management technology in maintaining network security	Dong Hui (137)
Research on the application and development of the key technology of 5G	Zhao Li (139)
Design and application of digital inclinometer based on mems sensor technology	Wang Weichao (141)
Application of Hi3559A in video structured platform	Zhang Zezi, Tan Dalun, Wang Donghai (143)
Research on venous puncture robot technology based on image processing technology	Peng Lixia (145)
Retrieval application of artificial intervention with different retrieval fields of patentics	Ding Ran (147)
Application of “Electrical Machinery” teaching base on Ansoft	Yang Guolong (149)
Analysis on spatial difference of urban and rural education informatization	Huang Yongxian, Duan Fang, Shu Qian (152)
Study on reconstruction of innovation and entrepreneurship course teaching in colleges and universities under the background of “Internet+”	Duan Fang, Huang Yongxian (154)
Design and development of wheel chair upper limb rehabilitation training system based on Arduino	Tang Xuan (156)
Study of the influence of the Tibetan national culture on the animation of China	Cao Ruixue, Yang Xiaobo (158)
Fine marketing analysis of communication operators	Liang Shuqin (161)
Research on innovation of ideological and political education theory course in higher vocational colleges	Sun Juan (163)
Research on music teaching based on Internet technology	Yuan Shuhui (165)
Design and development of blended learning model for primary and middle school maker education	Wang Peijing, Xiong Huazhen (167)