

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3月 第06期 第16卷

No.06 Vol.16

ISSN 1672-6944



万方数据

2019 06

2004年创刊

2019年第6期

(总第154期)

第16卷

半月刊

2019年3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

执行主编: 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 黄风义

目 次

通信观察

- 1 多点协作通信研究 曹玉洁 宁远翔 施恩惠 崔甜甜 林积昶
3 一种基于P2P内容分发系统带宽分配算法研究 张 旋 李 铭 李晓强 曹建民
5 基于区块链技术的信用应用 段静波
7 基于Zipf多点协作通信中文件命中率问题 宁远翔 曹玉洁 张玉婷 黄苗苗 林积昶
9 大数据环境下无线通信关键技术研究 钱兆楼
11 民航空管高频话音通信系统建设研究 王小武

无线天地

- 14 基于窄带物联网的空调控制平台的设计 林东旭 陈明明 耿 亮 陈育智
17 移动式漏斗与带式输送机无线联动控制系统的创新应用 张旭富 陈木亮
19 物联网的医院病房智能监护系统设计分析 刘 芳 王 芳 楚智慧
21 无线覆盖发射台信号源系统的开发应用 谢永峰
23 基于卷积神经网络的短文本分类研究 陆正球 毛焕宇 王海颖

网络地带

- 26 计算机图形学和视觉应用在互联网视频媒体处理中的应用 郑文艳
28 基于VMware技术的网络攻防平台设计与实现 顾理军
30 边缘网络中QoS感知的应急多设备协同机制 邢 婷 魏小敏 李梦宇
35 虚拟化数据中心的安全问题研究 白雪松 于七龙 陈艳军 贾荣秀
37 共享经济在互联网时代的发展探析 王 华
39 IP-RAN传输网络的实践与应用 李海军
41 基于网络学习空间的“VB程序设计”课程教学改革实践探索 张庆莉 张淋江
43 云计算环境下数据安全与隐私保护 蒋晓川 陈清毅 杨 潜
45 计算机网络安全中虚拟网络技术的应用探讨 焦安权

软件透视

- 47 双压缩机式的太阳能冷藏车制冷系统动力切换与控制策略 徐胜楠 袁 欣
49 基于OCR技术的室内定位APP开发 王 杰 黄才林 康珠卓玛
51 基于可见光的音频数字传输系统 刘 珊 刘雨享
53 基于Android的行车助手APP的设计和实现 张晓艳 孙天宇 孙 逊
55 基于Scratch编程的创客课程学习现状调查 陈孝然
57 基于Access的河南师范大学图书管理系统 秦文宁 张若楠 王 瑾 孔前进 尹天宇
59 基于移动平台的三农职业教育培训体系研究 刘青云 许莉丽
61 基于多平台的计算机软件测试方法研究 李庆年
63 “通信原理”课程自主学习软件设计与实现 景子洋 李 楠

设计分析

- 65 基于偏微分方程的高温作业专用服装设计模型 高 振 房 越 许乾宸
67 基于MVC模式和Java EE技术仓储管理系统的设计与实现 赵 骥 张东洋 刘业顺 李广生 陈晓艳
70 基于AME Sim的液压加载系统设计与仿真 张晓菊 王维娜
72 基于移动云平台的市场营销类课程混合式教学设计 李 颖

- 74 基于Kinect的平衡功能康复训练系统应用设计 张志鹏
76 大数据下个性化的高等数学教学设计 赵玉娟
79 基于PB和C/S的超市管理系统的设计实现 范晓云
82 面向板结构的小型冲击监测仪设计 刘 淼 陈晓琦 金振洲
84 贵州松桃旅游管理与宣传系统设计与实现 程 庆 邹 华 赵颖璐
86 平衡计分卡在高校行政管理部门绩效管理中的应用 刘纯洁
88 基于Arduino的胶囊咖啡平台机设计 成 程 蒋嘉程 吴汶鸿 刘 琦 郭文仙

数字教育

- 90 基于应用型本科的“电力系统分析”课程教学改革研究 徐志伟 丁旭东 姜 燕
92 PBL教学模式在高校“C++程序设计”教学中的应用研究 江 涛
94 以职业技能大赛为导向的“工程造价”考核体系策略研究 马 明 朱琳琳 柳志萍
96 新形势下高职院校合作建设BIM实训室的研究与实践 张威琪 张建华 李晓光
98 基于云平台的课程教学资源库建设研究
——以“焊接技术及质量检验”为例 霍仁杰
100 汽车运用与维修技术专业3+3中高职衔接人才培养探讨 陈 跃 沈 阳
102 电梯专业教学资源库开发的研究与思考 李 冰
104 基于计算思维的计算机基础课程教学实施过程研究与实践 曹建英 门 瑞
106 高校计算机实验室建设与管理研究 曾 光
108 基于混合型学习的高职课程教学实践 曾凌峰 李卓然
111 “翻转课堂”模式在数据分析基础教学中的设计与应用研究 王国才
113 汽车运用与维修技术专业3+3中高职衔接实习基地建设探讨 陈 跃 沈祝斌

实验研究

- 115 基于ORB算法的坐姿识别综述 许飞鸿 孙 林 齐 鹏 王钰琪 胡 浩
118 基于DSP的双桨无人艇直线路径跟踪设计与方法 卢章成
120 飞机客舱4041系列顶灯功能原理介绍及故障分析 张伟亮 宋新建 李 政
123 基于相关性和SINR的MIMO自适应模式切换 张全君 吴阿沛
125 互联网背景下的汽车尾气治理解决方案 张曦允
127 基于Hadoop和Python的高校图书馆个性化服务的研究与应用 刘 哲
130 汽车产业C2B体系的探索和研究 宫 力 张 鑫 张艺璇 谢鑫鑫
134 基于大数据的贸易分析模块构建分析 陈青艳 刘晓平 赵瑾璐
136 基于相关性对某实测数据海杂波特征提取算法进行改进 罗才震 柴晓飞

技术应用

- 139 大数据在高校创新型人才培养中的应用模式 史晓琼
141 应用于专用测试设备的接口单元技术 沈 智
143 计算机图像处理技术在网页设计中的应用 管艺博
145 计算机硬盘故障数据恢复技术分析 韦同胜 高梓铭
147 大数据学生画像技术在高职人才培养中的应用研究 王 越
149 混沌密钥在彩色图像的数字水印技术中的应用研究 张 腾 张 璽 周 霆
151 终端计算模式集中管控系统建设实践 许 柔 冯 蓓
154 基于移动教学的红色文化团学智媒体课堂教学信息采集与评价研究 秦响应 魏晓光 王新冉 张 瑜
156 小组合作学习在现代信息技术课程中的运用 王 虹
158 基于创客的中小学虚拟现实技术课程探究 吴丽华 蒲 悦 冯建平
160 信息技术与中高职院校数学课堂的融合
——对同题异构“对数函数”课堂教学的剖析 刘林艳
162 “算法设计与分析”“以赛励教、以赛督学”教学模式探讨 王金艳
164 计算机专业大学生知识价值观调查分析
——以攀枝花学院为例 王海光 张 丽
167 微信圈对职业院校学生社会交往的影响研究 贾英霞

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

邮 编: 210042

网 址: 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.6 2019 (Total No.154)

CONTENTS

Study on the multi-point cooperative communication	Cao Yujie, Ning Yuanxiang, Shi Enhui, Cui Tiantian, Lin Jichang (1)
Research of content delivery system bandwidth distribution algorithm based on P2P	Zhang Xuan, Li Ming, Li Xiaoqiang, Cao Jianmin (3)
Credit application based on blockchain technology	Duan Jingbo (5)
File hit rate problem based on Zipf multi-point cooperative communication	Ning Yuanxiang, Cao Yujie, Zhang Yuting, Huang Miaomiao, Lin Jichang (7)
Research on the key technology of wireless communication in the big data environment	Qian Zhaolou (9)
Research on construction of civil aviation air traffic control high frequency voice communication system	Wang Xiaowu (11)
Design of air conditioning control platform based on narrowband Internet of Things	Lin Dongxu, Chen Mingming, Geng Liang, Chen Yuzhi (14)
Innovative application of wireless linkage control system for mobile hopper and belt conveyor	Zhang XuFu, Chen Muliang (17)
Design and analysis on hospital ward intelligent monitoring system of Internet of Things	Liu Fang, Wang Fang, Chu Zhihui (19)
Development and application of signal source system for wireless coverage transmitter station	Xie Yongfeng (21)
Research on the short-text classification based on convolutional neural networks	Lu Zhengqiu, Mao Huanyu, Wang Haiying (23)
Application of computer graphics and visual applications in internet video media processing	Zheng Wenyan (26)
Design and implementation of network attack and defense platform based on VMware technology	Gu Lijun (28)
QoS-based emergency multi-device coordination mechanism in edge network	Xing Ting, Wei Xiaomin, Li Mengyu (30)
Research on security issues of virtual data center	Bai Xuesong, Yu Qilong, Chen Yanjun, Jia Rongxiu (35)
Analysis on the development of sharing economy in the Internet Age	Wang Hua (37)
Practice and application of IPRAN transmission network	Li Haijun (39)
Exploration on teaching reform of “VB Programming Design” course based on Web-based learning space	Zhang Qingli, Zhang Linjiang (41)
Data security and privacy protection in cloud computing environment	Jiang Xiaochuan, Chen Qingyi, Yang Qian (43)
Discussion on the application of virtual network technology in computer network security	Jiao Anquan (45)
Power switching and control strategy for refrigeration system of double compressor solar refrigerator	Xu Shengnan, Yuan Xin (47)
Development of indoor positioning APP based on OCR technology	Wang Jie, Huang Cailin, Kangzhuzhuoma (49)
Audio digital transmission system based on visible light	Liu Shan, Liu Yuxiang (51)
Design and implementation of a driving assistant application based on Android	Zhang Xiaoyan, Sun Tianyu, Sun xun (53)
Research on the current situation of maker education based on Scratch	Chen Xiaoran (55)
Library management system of Henan Normal University based on Access	Qin Wenning, Zhang Ruonan, Wang Cui, Kong Qianjin, Yin Tianyu (57)
Research on the training system of agriculture, rural areas and farmers vocational education based on mobile platform	Liu Qingyun, Xu Lili (59)
Research on computer software testing method based on multi-platform	Li Qingnian (61)
Design and implementation of “Communication Theory” self-learning system	Jing Ziyang, LiNan (63)
Special clothing design model for high temperature operation based on partial differential equation	Gao Zhen, Fang Yue, Xu Qianchen (65)
Design and implementation of warehouse management system based on MVC pattern and Java EE technology	Zhao Ji, Zhang Dongyang, Liu Yeshun, Li Guangsheng, Chen Xiaoyan (67)
Design and simulation of hydraulic loading system based on AME Sim	Zhang Xiaojun, Wang Weina (70)
Hybrid teaching design of marketing courses based on mobile cloud platform	Li Ying (72)
Application design of balance function rehabilitation training system based on Kinect	Zhang Zhipeng (74)
Design of the individualized higher mathematics teaching under the big data	Zhao Yajuan (76)
Design and implementation of the supermarket management system based on PB and C/S	Fan Xiaoyun (79)
Design of miniaturized impact monitor for plate structure	Liu Wei, Chen Xiaoqi, Jin Zhenzhou (82)

Design and implementation the tourism management system of Songtao in Guizhou	Cheng Qing, Zou Hua, Zhao Yingjun (84)
Application of BSC in performance management of administrative departments in colleges.....	Liu Chunjie (86)
Design of capsule coffee platform machine based on Arduino	Cheng Cheng, Jiang Jiacheng, Wu Wenhong, Liu Qi, Guo Wenxian (88)
Research on teaching reform of “Power System Analysis” course based on applied undergraduate ...	Xu Zhiwei, Ding Xudong, Jiang Yan (90)
Research on the application of PBL teaching mode in the teaching of “C++ Programming” in colleges	Jiang Tao (92)
Research on the strategy of “Engineering Cost” assessment system guided by vocational skills competition	Ma Ming, Zhu Linlin, Liu Zhiping (94)
Research and practice on the construction of BIM training room by higher vocational schools and enterprises under the new situation	Zhang Weiqi, Zhang Jianhua, Li Xiaoguang (96)
Research on the construction of curriculum teaching resource based on cloud platform: taking “Welding Technology and Quality Inspection” as an example	Huo Renjie (98)
Discussion on the talents training of connecting higher vocational education in 3+3 speciality of automobile operation and maintenance technology	Chen Yue, Shen Yang (100)
Research and thinking on the development of teaching resources database for elevator specialty	Li Bing (102)
Research and practice on the implementation process of computer basic course teaching based on computing thinking	Cao Jianying, Men Rui (104)
Study on the construction and management of computer laboratory in colleges and universities	Zeng Guang (106)
Teaching practice of higher vocational courses based on mixed learning	Zeng Lingfeng, Li Zhuoran (108)
Research on the design and application of “flipped classroom” mode in basic teaching of data analysis	Wang Guocai (111)
Discussion on the construction of connecting practice base of higher vocational education in 3+3 speciality of automobile operation and maintenance technology.....	Chen Yue, Shen Zhubin (113)
Summary of sitting position recognition based on ORB algorithm.....	Xu Feihong, Sun Lin, Qi Peng, Wang Qiqi, Hu Hao (115)
Design and method of linear path tracking for with double propeller based on DSP	Lu Zhangcheng (118)
Introduction to the function principle and fault analysis of the 4041 series ceiling light of the aircraft cabin	Zhang Weiliang, Song Xinjian, Li Zheng (120)
Adaptive MIMO mode switching based on correlation and SINR	Zhang Quanjun, Wu Apei (123)
Solution of vehicle exhaust control under the background of Internet	Zhang Xiyun (125)
Research and application of personalized service in university library based on Hadoop and Python	Liu Zhe (127)
Exploration and research on C2B system of automobile industry	Gong Li, Zhang Xin, Zhang Yixuan, Xie Xinxin (130)
Analysis on the construction of trade analysis module based on big data	Chen Qingyan, Liu Xiaoping, Zhao Jinjun (134)
Detection based on the recognition rate of a certain pair of sea data.....	Luo Caizhen, Chai xiaofei (136)
Application mode of big data in the cultivation of innovative talents in colleges and universities.....	Shi Xiaoqiong (139)
Interface unit technology for dedicated test equipment	Shen Zhi (141)
Application of computer image processing technology in Web design	Guan Yibo (143)
Analysis of computer hard disk failure data recovery technology	Wei Tongsheng, Gao Ziming (145)
Research on the application of large data student portrait technology in vocational training	Wang Yue (147)
Study on application of chaotic keys in digital watermarking for color image	Zhang Teng, Zhang Zhao, Zhou Ting (149)
Terminal computing mode centralized management system construction practice	Xu Rou, Feng Bei (151)
Research on the collection and evaluation of red culture and intelligence media classroom teaching information based on mobile teaching	Qin Xiangying, Wei Xiaoguang, Wang Xinran, Zhang Yu (154)
Application of group cooperative learning in modern information technology course	Wang Hong (156)
Research on virtual reality technology course based on makers in primary and middle schools	Wu Lihua, Pu Yue, Feng Jianping (158)
Integration of information technology and mathematics classroom in secondary vocational school—an analysis of classroom teaching on isomeric “Logarithmic Function” in the same problem	Liu Linyan (160)
Discussion on teaching mode of “promoting teaching and learning with competition” for “algorithm design and analysis”	Wang Jinyan (162)
Analysis on the investigation of knowledge values of computer majors: taking Panzhihua University as an example	Wang Haiguang, Zhang Li (164)
Research on the influence of WeChat circle on the social interaction of vocational college students	Jia Yingxia (167)