

◎ 中文核心期刊

◎ 中国科技核心期刊      RCCSE中国核心学术期刊(A)

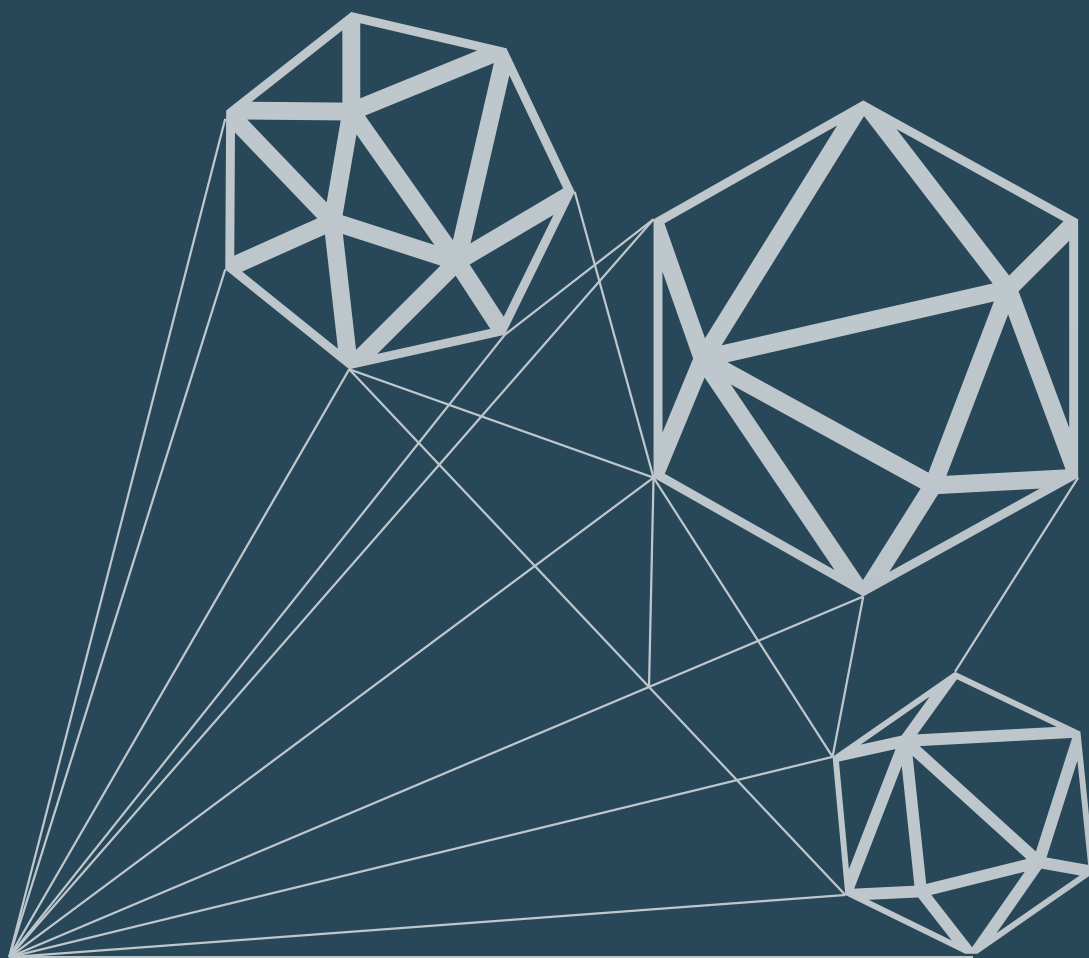
◎ 主办：陕西电子杂志社    陕西省电子技术研究所

Modern Electronics Technique

# 现代电子技术®

<http://www.xddz.com.cn>

◇ 中国电子学会重点支持期刊



ISSN 1004-373X



2017

第40卷

Vol. 40 No. 21

21

## 目次

## 通信与信息技术

## 军事通信

- 基于遥测数据的在轨卫星性能预测方法研究 .....马凯航, 高永明, 李 磊, 吴芷媛 (1)
- Ad Hoc网路由协议在常规靶场中的应用及仿真 .....王祖良, 李 旭, 张 婷, 郑林华 (6)

## 无线通信

- 基于NI USRP-RIO平台的MIMO-OFDM信道估计研究与实现 .....左明阳, 陆彦辉, 王 宁, 杨守义 (10)
- 基于PID控制器的无线局域网帧聚合算法研究 .....徐健锐 (15)
- 基于ZigBee技术的可组网环境监测系统设计 .....刘培学, 陈玉杰, 姜宝华, 刘树美 (19)
- 基于嵌入式的农场智能监控系统研究 .....冉耀宗 (23)
- 基于Web架构的视频监控系统研究与实现 .....李 杰, 李 静 (27)
- 基于移动最小二乘法的点云数据孔洞修补算法 .....张予民 (31)
- 基于物联网的智能图书馆系统设计 .....鹿玉红, 刘 颖, 段 丽, 薛 韡 (35)

## 通信设备

- 应用于Ka波段无线通信的发射前端模块设计与制造  
.....陈守维, 王启东, 陈 诚, 李 君, 汪 鑫, 曹立强, 陆 原 (39)
- 具有谐波抑制的小型化混合环耦合器设计 .....祝子辉, 王钟葆 (43)
- 一种应用于WLAN双频的T型介质谐振器天线 .....郑浩天, 林文斌, 阚国锦, 邹德友 (46)

## 信号与图像处理

- 机载GNSS-R海面风场信号处理技术研究 .....刘原华, 张珂娜, 牛新亮 (49)
- 穿墙雷达产品设计中干扰信号的分析与应对 .....葛兆斌, 杨秀蔚, 颜 广, 杨传法 (52)
- 基于改进遗传算法的电力设备红外图像分割研究 .....李 祥, 崔昊杨, 皮凯云, 许永鹏, 钱 婷 (56)
- 基于虚拟现实技术的3D动画场景平面设计 .....傅建明, 鲍 艳 (59)
- 基于兴趣点检测的视觉关键词提取新方法研究 .....陈晓宁, 赵 健, 杨润丰 (62)
- 计算机图形图像技术在美术领域中的应用 .....刘凤凯 (66)
- 基于改进高斯混合模型的运动目标检测与跟踪 .....邹季忻 (69)

## 信息安全

- 基于TOPSIS的网络系统危险指数的计算方法 .....丁立彤, 范九伦, 刘意先 (73)
- 基于数据挖掘的信息系统安全态势估计 .....张吉生, 张 波, 沈 青 (77)
- 蚁群算法选择神经网络参数的网络入侵检测 .....刘芳芳 (80)
- 3D MAX动画中材质参数的数字水印算法 .....李亚琴, 方立刚 (84)

## 测试·测量·自动化

### 测控技术

- 单片机在家庭防火防盗控制系统中的应用 .....张秋菊, 李丽芬, 邵泽军 (87)
- 基于机器学习的大学生自杀风险预测与分析 .....丁楠 (91)
- 基于Arduino的双模式智能避障小车系统设计与实现 .....赵云娥, 吴振强 (94)
- 基于小波变换的CO<sub>2</sub>预裂腔内压力时频特征分析 .....闫睿, 裴东兴, 崔春生 (98)
- 基于改进粒子群算法的软件可靠性评估 .....李宁 (102)
- 基于支持向量机的光电测量系统畸变校正 .....彭晓雷 (105)
- 大学生就业的建模与预测研究 .....李想 (109)

### 自动化技术

- 基于多属性模糊C均值聚类的属性约简算法 .....李诗瑾, 李倩, 徐桂琼 (112)
- 一种自适应资源精细匹配的DAG调度方法 .....胡鹏辉, 邓晓华, 魏静波, 陈腊娇 (117)
- 基于模糊理论的英语机器翻译语义调序研究 .....胡广耀 (121)

## 电子技术应用

### 工控技术

- 基于网络的数控机床能耗监测系统 .....张玉良, 刘强, 刘启通 (124)
- 改进捕鱼算法求解柔性作业车间调度问题 .....杨剑勇 (128)
- 模糊自适应PID控制的恒张力收卷系统研究 .....郑刚, 李斌, 梁于州 (132)

### 节能减排技术

- 混合动力汽车的节能控制模式设计与实现 .....宁大方 (136)
- 海绵城市建设中嵌入式雨水收集系统设计研究 .....何茜 (141)

### 汽车电子

- 基于PLC和CPLD的瞬时碰撞速度检测与应用研究 .....刘国跃, 廖育武, 应保胜 (145)

### 电子技术

- 基于非线性跟踪微分器的编码器数据采集应用 .....曲云昭, 李洪文, 邓永停, 王晶 (149)
- 基于IMX6的手扶电梯智能视频监控系统设计 .....杜启亮, 曾东明, 田联房, 张大明 (153)
- 基于k-空间格林函数的近场声全息滤波方法研究 .....张一澍, 马宏伟, 王星, 王浩添 (158)
- 基于通电空心线圈的脉冲磁场分析 .....夏鹏飞, 杨少龙, 韩志涛, 于景奇, 郑德康, 宋永惠, 潘新祥 (162)
- WSN和数据融合理论在钢管损伤识别研究中的应用 .....何孝兵, 俞阿龙 (167)
- 基于典型故障限流措施的输电系统可靠性评估 .....崔馨元, 涂莉, 葛梦昕 (170)
- 基于扩展DFT的谐波检测算法的研究 .....张静, 赵庆生, 王旭平, 郭尊 (175)
- 基于OAI协议的区域图书馆数据共享平台设计与实现 .....蒲晔芬 (180)
- 基于挣值分析法的电网企业信息化项目管控策略研究 .....方宽, 黄杰韬, 黄慧欣, 林俊 (183)

# Contents

Study on performance prediction method of satellite in orbit based on telemetry data .....	MA Kaihang, GAO Yongming, LI Lei, WU Zhihuan (1)
Application of Ad Hoc routing protocol in conventional shooting range and its simulation .....	WANG Zuliang, LI Xu, ZHANG Ting, ZHENG Linhua (6)
Research and implementation of MIMO-OFDM channel estimation based on NI USRP-RIO platform .....	ZUO Mingyang, LU Yanhui, WANG Ning, YANG Shouyi (10)
Research on PID controller based frame aggregation algorithm for wireless local area network .....	XU Jianrui (15)
Design of networking environment monitoring system based on ZigBee technology .....	LIU Peixue, CHEN Yujie, JIANG Baohua, LIU Shumei (19)
Research on farm intelligent monitoring system based on embedded system .....	RAN Yaozong (23)
Research and implementation of video surveillance system based on Web architecture .....	LI Jie, LI Jing (27)
Point cloud data hole-filling algorithm based on moving least square method .....	ZHANG Yumin (31)
Design of intelligent library system based on Internet of Things .....	LU Yuhong, LIU Ying, DUAN Li, XUE Wei (35)
Design and manufacture of transmitting front-end module for wireless communication in Ka-band .....	CHEN Shouwei, WANG Qidong, CHEN Cheng, LI Jun, WANG Xin, CAO Liqiang, LU Yuan (39)
Design of a miniaturized rat-race coupler with harmonic suppression function .....	ZHU Zihui, WANG Zhongbao (43)
A T-type dielectric resonator antenna covering WLAN's two frequency bands .....	ZHENG Haotian, LIN Wenbin, KAN Guojin, ZOU Deyou (46)
Research on airborne GNSS-R signal processing technology of sea surface wind field .....	LIU Yuanhua, ZHANG Kena, NIU Xinliang (49)
Analysis and countermeasure against interference signal in design process of through-the-wall radar .....	GE Zhaobin, YANG Xiuwei, YAN Guang, YANG Chuanfa (52)
Research on electrical equipment infrared image segmentation based on improved genetic algorithm .....	LI Xiang, CUI Haoyang, PI Kaiyun, XU Yongpeng, QIAN Ting (56)
Graphic design of 3D animation scene based on virtual reality technology .....	FU Jianming, BAO Yan (59)
Study on visual keywords extraction new method based on points of interest detection .....	CHEN Xiaoning, ZHAO Jian, YANG Runfeng (62)
Application of computer graphics and image technology in fine art field .....	LIU Sukai (66)
Moving target detection and tracking based on improved Gaussian mixture model .....	ZHI Jixin (69)
TOPSIS-based risk index calculation method of network system .....	DING Litong, FAN Jiulun, LIU Yixian (73)
Information system security situation assessment based on data mining .....	ZHANG Jisheng, ZHANG Bo, SHEN Qing (77)
Network intrusion detection based on ant colony optimization algorithm selecting parameters of neural network .....	LIU Fangfang (80)
Digital watermarking algorithm of texture parameters in 3D MAX animation .....	LI Yaqin, FANG Ligang (84)
Application of single-chip microcomputer in home fireproof and theftproof control system .....	ZHANG Qiuju, LI Lifan, SHAO Zejun (87)
Prediction and analysis of college student suicide risk based on machine learning .....	DING Nan (91)
Design and implementation of Arduino-based two-mode intelligent obstacle avoidance system for car .....	ZHAO Yun'e, WU Zhenqiang (94)
Time-frequency characteristics analysis of pressure signal in CO <sub>2</sub> pre-splitting intracavity based on wavelet transform .....	YAN Rui, PEI Dongxing, CUI Chunsheng (98)
Software reliability evaluation based on improved particle swarm optimization algorithm .....	LI Ning (102)
Distortion correction of photoelectric measurement system based on support vector machine .....	PENG Xiaolei (105)

Research on modeling and forecasting of college students employment .....LI Xiang (109)

Attribute reduction algorithm based on multiattribute fuzzy C-means clustering .....LI Shijin, LI Qian, XU Guiqiong (112)

A DAG scheduling method for adaptive resources subtle matching.....HU Penghui, DENG Xiaohua, WEI Jingbo, CHEN Lajiao (117)

Study on fuzzy theory based semanteme ordering of English machine translation .....HU Guangyao (121)

Network-based energy consumption monitoring system of numerical control machine tool ...ZHANG Yuliang, LIU Qiang, LIU Qitong (124)

Improved fishing algorithm for solution of flexible job-workshop scheduling problem .....YANG Jianyong (128)

Research on constant tension winding system based on fuzzy self-adaptive PID control .....ZHENG Gang, LI Bin, LIANG Yuzhou (132)

Design and implementation of energy-saving control mode for hybrid electric vehicle.....NING Dafang (136)

Design of embedded rainwater collection system in sponge city construction .....HE Qian (141)

Instantaneous collision speed detection based on PLC and CPLD and its application .....LIU Guoyue, LIAO Yuwu, YING Baosheng (145)

Application of encoder data acquisition based on nonlinear tracking-differentiator  
.....QU Yunzhao, LI Hongwen, DENG Yongting, WANG Jing (149)

Design of escalator intelligent video surveillance system based on IMX6  
.....DU Qiliang, ZENG Dongming, TIAN Lianfang, ZHANG Daming (153)

Study on near-field acoustic holography filtering method based on k-space Green function  
.....ZHANG Yishu, MA Hongwei, WANG Xing, WANG Haotian (158)

Analysis on pulsed magnetic field based on axisymmetric hollow coils  
.....XIA Pengfei, YANG Shaolong, HAN Zhitao, YU Jingqi, ZHENG Dekang, SONG Yonghui, PAN Xinxiang (162)

Application of WSN and data fusion theory in study of steel tube damage identification .....HE Xiaobing, YU Along (167)

Power transmission system reliability assessment based on typical fault current limiting measures  
.....CUI Xinyuan, TU Li, GE Mengxin (170)

Research on harmonic detection algorithm based on extended DFT .....ZHANG Jing, ZHAO Qingsheng, WANG Xuping, GUO Zun (175)

Design and implementation of regional library data sharing platform based on OAI protocol .....PU Yefen (180)

Research on power grid enterprise informatization project control strategy based on earned value management method  
.....FANG Kuang, HUANG Jietao, HUANG Huixin, LIN Jun (183)

二〇一七  
年  
理  
事  
会  
企  
业  
名  
录

- ※ 军械工程学院导弹工程系
- ※ 中国移动通信集团陕西有限公司
- ※ 中国电子系统工程第二建设有限公司陕西分公司
- ※ 国家无线电频谱管理研究所
- ※ 陕西广电网络传媒股份有限公司
- ※ 陕西华达科技有限公司
- ※ 陕西长岭电子科技有限公司
- ※ 中国人民解放军西安通信学院
- ※ 中国电子科技集团公司第三十九研究所
- ※ 西京电气总公司
- ※ 西安卫光半导体有限公司
- ※ 西安卫光科技有限公司
- ※ 陕西省广播电视信息网络股份有限公司
- ※ 中国航天时代电子公司第七七一研究所
- ※ 中国电信股份有限公司陕西省分公司

欢  
迎  
加  
盟  
  
共  
同  
成  
长