

自动化与仪器仪表

(月刊)1981年创刊

2016年第10期(总第204期)

2016年10月25日出版

邮发代号:78-8

主管单位:

重庆市科学技术协会

支持单位:

中国自动化学会

中国仪器仪表学会

主办单位:

重庆市自动化与仪器仪表学会

重庆工业自动化仪表研究所

出版单位:

重庆科技发展有限公司

《自动化与仪器仪表》编辑部

刊社地址:

重庆市渝北区人和杨柳路2号

A塔楼14楼1405室

邮编:401123

网址:www.zdhyyqyb.cn

出版部电话:023-63050371,63050131

传真:023-63050621

成都办事处电话:028-81328130

高级顾问:汪燮卿院士

孙优贤院士

总编:刘斌

主编:孙怀义

执行主编:胡君德

常务副主编:张新国

广告部:胡君德 甘科 游先碧

制作部:邓雯静

客户服务部:万良力

印刷:重庆荟文印务有限公司

发行:重庆市邮政局

订购:全国各地邮政局

发行范围:国内外公开发行

国外发行:

中国国际图书贸易总公司 BM2871

国际标准连续出版物号:

ISSN1001-9227

国内统一连续出版物号:

CN50-1066/TP

广告经营许可证:231318

定价:25.00元

中国光学学会光电技术专业委员会
中国仪器仪表学会光机电技术与系统集成分会

会刊

编辑委员会

名誉主编:叶声华

编委会主任:石祥聪

编委会副主任:刘铁根 王雪 王文海

委员(以姓氏拼音排序):

曹庄琪 陈茂 邓奥 董新永 方原柏 葛泉波 付三强 高仕斌 刘琴
李川 李艳秋 梁忠诚 刘桂雄 蒙建波 彭燕华 秦开宇 孙跃 石为人
孙怀义 桑新柱 宋爱国 涂亚庆 王平 王厚军 王刚 王大勇 王昭
吴朋 徐征 许立新 岳中明 杨军 张翠芳 张庆福 张凌 张存林
张伟刚 张旭莘 赵维谦 赵跃进 赵勇 赵光明 朱永 邾继贵

目次表

过程自动化

矿井无人值守排水系统高可靠性研究	方泉,李敬兆,高之翔(1)
财会软件的智能感知功能研究	杨睿(5)
基于可拓模型的智能化营区规划策略研究	荀平,王伟健,李丰恺(7)
基于力补偿控制的音圈电机的力/位控制系统的研究	尹训锋,潘松峰,刘朔,尹峰松(9)
田径比赛电子计时器及其田径终点摄像系统研究	蒋莹(12)
基于单片机绿植养护系统温度控制的研究	王冉,高凯,孟磊(14)
基于MFC技术自动化系统架构设计	刘涛(16)
基于ZigBee无线传输的运动员动作捕捉系统设计	马杰(18)
用电信息采集终端RS-485抄表辅助端子功能的扩展设计	阮治军,何小龙(20)
基于LabVIEW的电子电路模拟及仿真设计	李雯(22)
一种基于dsPIC30F3011的具有V2G功能的充放电系统设计	孟醒(24)
基于数据仓库的一体化电力调度自动化系统的开发与设计	李国伟,王新铭(26)
游泳运动员训练过程中实时监控系统的研制与应用	马保雷(30)
DAQmx与OPC在过程控制实验装置中的应用	陈正,陈建华(32)
基于三角剖分的空间数据插值方法	陈玲侠,张军利(35)
基于可靠及高效需求下的多路视频接入和处理软件方案	屈青青(37)
混合交通流下的智能交通系统建模、控制与仿真	孙菲(39)
基于模糊逻辑的三步搜索算法	张长帅,刘岩,陈祥滨,赵男见(41)

机械制造自动化

N ₂ 载货汽车ABS测试方法研究	许向国,李恩科(45)
室外机械整机性能测试案例研究	郭雷,高智刚(47)
基于磁饱和电抗器式弧焊电源性能的改装研究	王建勋(50)
飞机电子信息电磁兼容顶层量化的仿真模型设计研究	侯艳红(52)
开关柜的智能化技术研究	李快社,董青青(54)
基于CAN总线技术的机械臂自动控制系统设计	赵小刚(56)
基于模糊PID控制的电锅炉控制系统的设计	柳莺,席小卫,闫璞(59)
基于语音识别的智能植物养护系统设计	孟磊,王冉,高凯(61)
基于WinCC燃气蒸汽锅炉的冗余控制系统设计	陈卫乾,陆建旻,黄健(63)
高温高压氧气球阀的设计	何武,段大军,吴明祥(65)
基于K60的风力摆控制系统设计	宫玉芳,赵霞,杨志飞(67)
矿井内单车道固定会车点车辆运行控制信号系统设计	任继锋,李峰(70)
工业机器人在冲压自动化生产线中的应用分析	陈英(73)
浊度传感器的流通池的设计	余名,唐云建(75)
变压器油纸绝缘频域介电谱特性的研究与应用	刘玲,汪琳娜(77)
屏蔽门自动控制系统在地铁站中的应用	贺丽娟(80)
基于TMS320F28335高精度串行A/D和D/A转换芯片的接口设计与实现	李冬梅,胡睿(82)
基于四旋翼无人机的环境监测系统	严孝鑫,张航,周鑫,张帅,邱紫阳,仇国庆(85)
核电反应堆压力容器不锈钢堆焊层缺陷漏检分析与探讨	马少亮(87)
石油化工仪表自动化设备的维护措施探析	张羽翀(89)
螺旋离心泵叶顶间隙对空化影响的计算与分析	杨文洁(91)
基于柔性阵列压力传感技术的跑步机步态特征获取系统	刘业飞(93)

基于永磁传动设备的磁闭锁装置	周龙德,白万本(95)
核燃料组件检查仪多轴运动控制系统技术改进	王 斌(96)
基于无刷直流电机的泥浆脉冲发生器控制系统研制	梁 耀,李传伟,代志平,奥 云,刘容华(99)

管理自动化

高速公路路面自动化检测技术研究	黄 娟(102)
基于 RFID 技术的移动临床护理系统研究	邬剑飞,周路明(104)
基于 RFID 的体育训练考勤系统研究	孙卫华(107)
基于 B/S 结构的中小企业会计电算化系统研究	杨 丹(109)
基于加密技术的高职校园网信息安全管理研究	刘 江,陈 琪(111)
基于云平台在污水处理厂控制系统中的应用	张子毅,骆东松,姜 伟(113)
西气东输 24V 直流电源绝缘监测系统的应用研究	黄健发,马庆生,胡天明,邓振伟,冯友琪(115)
靶标定向侧推系统遥控软件的设计	王海涛,秦 刚(117)
基于物联网的慢性病监护系统设计	郭 静,樊虎杰(119)
我国智能物流发展支撑体系的设计	刘海斌(121)
一种针对资源约束设备服务集成的面向服务架构	王 懿,傅 宏,邱 林,夏海燕(123)
电力物资招投标信息管理系统的开发和应用解析	赵 勇(127)
基于物联网技术的库岸滑坡自动化监测系统分析	陈引锋,马长玲(129)
高速公路路面破损特征的检测与识别技术	王愉龙(131)
基于智能 Agent 技术的体育场馆虚拟化经营	李卫星(133)

实验室自动化

新一维混沌系统分析研究	李娟霞,孙会明,陈 薇(135)
一种新型粘度测量系统的研究	马 力,朱新河,严志军,程 东(139)
模块化云储存安全技术的研究	高 菲,唐晓强(141)
基于 Simulink 的电力电子变流电路模型设计的研究	王月爱,王 勃(144)
多媒体语音室建设方案研究	范宁洁(146)
大数据背景下的网络信息安全研究	杨 艳,张 莹(149)
基于 Flexsim 的挂车组装生产线物流系统仿真研究	秦 成,程学生,张道兴,盛军德(151)
智能网络系统支撑下的智能英语教学系统研究	任蓓蓓(153)
分布式环境中保护隐私数据挖掘算法研究	刘晓丹(155)
基于 Kinect 的体育教学示教系统研究 自动化	杨志强(157)
对模糊层次法的改进型网络安全评估方法研究	杨林慧,孙少华,孙晓东(159)
计算机在成本核算中的应用研究	刘 力(161)
基于网络安全的计算机取证技术研究	于 琳,丁 汨(164)
基于 Hadoop 的海量数据的分布式存储关键技术研究	杨晓雁(166)
面向移动设备的园林平台的设计与研究	乔国娜(168)
基于 Zigbee 技术的无线集抄系统数据采集及软件设计	苏贤乐,张燕区(170)
基于 Access 数据库及 NET 结构的通用社区体育管理系统框架设计	刘忠举(173)
基于自动化技术的篮球竞赛管理系统设计	谢新涛(175)
面向主动入侵防御的动态复合虚拟网络框架设计	段 飞(177)
基于网络的无记名评分系统的设计与实现	王化冰(179)
基于市场营销系统的多层分布式架构设计及应用	张海云(181)
校园网 IPv4 到 IPv6 过渡技术分析与应用	田爱宝(183)
基于结构方程的汽车 4S 店顾客满意度测评模型研究与应用	孙 延(185)
人工智能(AI)技术在人力资源管理信息系统的应用	龙彦君(187)
双目视觉技术在人机交互体育运动中的应用	薛亚东(189)
45 度斜视角在自动化人机界面软件中的应用探索	李明春(191)
通过教育数据挖掘和学习分析促进教与学	任庆东,王璐璐(193)
PWM 信号的傅里叶级数分析及 Matlab 仿真	张成蛟,谢少伟(195)
基于细胞核特征的宫颈癌细胞图像的识别与分类	宁梓涓,罗 微,李 燕,吕鹏举,李 萌(197)
计算机体系结构软件模拟技术分析	黄永飞(200)
面向移动 Ad Hoc 网络的可生存性模型建模及其仿真验证方法	辛建军(202)
基于改进遗传算法的网络安全检测模型及系统构建	曾兆敏(204)
学生体质测试自动化系统开发	史文生(206)
基于 ARM 的智能化建筑安防系统的研究与实现	张 健(208)
一种混合电力数据处理模型	许元斌(210)
物联网推动物流智能化的关键因素分析	李吟龙(214)
基于低压电力线载波通信信道特性的分析	赵永辉,张建伟,李仕林,杨 明,杨 昊(216)
基于体感网的人体运动监测动作识别研究	梁 园(219)
智能手机健身 App 的自我监控功能研究	蔡晶晶(221)
基于安全性的智慧校园一卡通技术研究	樊颖军(223)

家庭自动化

一种基于 web 技术的智慧医疗系统设计	张泽月,罗俊波,杨 芳,孙 强,易显富,戢晓珊(225)
基于 Web 和 GPRS 的智能家居远程监控系统	张万良(227)

Sponsor :

Chongqing Automation And Instrumentation Society
Chongqing Institute of Industrial Automation and Instrumentation

Published by ;

Editorial Office of AUTOMATION and INSTRUMENTATION
(NO. 2 Yangliu road renhe Yubei Chongqing)

China ZIP Code :401123

Web : www. zdhyqyb. cn

Printed by :

Chongqing huiwen printing co ,. ltd.

Distributor :

Chongqing post Office

Subscription :

All Domestic post Office

Code :78-8

Chief Editor :Sun Huai-yi

ISSN1001-9227

CN50-1066/TP

投稿须知

1. 本刊已加入“中国期刊网、中国学术期刊(光盘版)”、“万方数据-数字化期刊群”等,如作者不同意入编,请在投稿时注明,本刊将做适当处理。
2. 本刊有出版电子版、网络版等权力,作者著作权使用费(含上述几种方式)和稿酬一起一次性付清。

AUTOMATION & INSTRUMENTATION

NO. 10,2016

CONTENTS

PROCESS AUTOMATION

Research on high reliability of mine unattended drainage system Fang Quan, Li Jingzhao, Gao Zhixiang(1)

Research on the IntelliSense function of accounting software based on DM Technology Yang Rui(5)

The study of intellectualized camp planning based on extenics model Xun Ping, Wang Weijian, Li Fengkai(7)

The Study of Force Position Control System of Voice Coil Motor Based on Force Compensation Control Yin Xunfeng, Pan Songfeng, Liu Shuo Yin Fengsong(9)

Research on the track and field competition electronic timer and terminal camera system Jiang Ying(12)

Research of temperature control system based on MCU green plant maintenance Wang Ran, Gao Kai, Meng Lei(14)

Architecture design of automation system based on MFC Technology Liu tao(16)

Design of Athletes Motion information Capture System Based on the ZigBee Wireless Transmission Ma Jie(18)

The expansion design of the function of the auxiliary terminal of the RS-485 meter reading of the electric information acquisition terminal Ruan Zhijun, He Xiaolong(20)

Design of electronic circuit simulation and simulation based on LabVIEW Li Wen(22)

A charging and discharging system has V2G function based on dsPIC30F3011 Meng Xing(24)

Research on Algorithm Mode of Optimization Problems Li Guowei, Wang Xinming(26)

The development and design of monitoring system based on the Swimmers' training process Mao Baolei(30)

Application of DAQmx and OPC in process control experiment device Chen Zheng, Yang Fan(32)

Dept of Tourism and Resource Environment Chen Lingxia, Zhang Junli(35)

Software Scheme for the Multi Channel Video Access and Processing based on Reliable and Efficient Demand Qu Qingqing(37)

Modeling, Control and Simulation of Intelligent Transportation System Under Mixed Traffic Flow Sun Fei(39)

Three Step Search Algorithm based on Fuzzy Logic Zhang Changshuai, Liu Yan, Chen Xiangbin, Zhao Nanjian(41)

MACHINERY MANUFACTURING AUTOMATION

Study of testing method for ABS used in N2 type light-duty vehicle Xu Xiangguo, Li Enke(45)

Outdoor Mechanical Performance Testing Case Study Guo Lei, Gao Zhigang(47)

The performance of arc welding power source based on magnetic saturation reactor type modification research Wang Jianxun(50)

Research on the Simulation Model Of Electromagnetic Compatibility Top-level Quantization Of Aircraft Electronic Information System Hou Yanhong(52)

The intelligent switchgear technology research Li Kuaishe, Dong Qingqing(54)

Based on CAN bus technology, the automatic control system design of mechanical arm Zhao Xiaogang(56)

Design of Control System for Electric Boiler Based on Fuzzy PID Algorithm Liu Ying, Xi Xiaowei, Yan Pu(59)

Design of Intelligent Plant Maintenance based on Phonetic Recognition System Meng Lei, Wang Ran, Gao Kai(61)

Design of redundancy control system based on WinCC gas steam boiler Chen Weiqian, Lu Jianmin, Huang Jian(63)

The design of high temperature and high pressure oxygen ball valve is outlined He Wu, Duan Dajun, Wu Mingxiang(65)

Design of wind power control system based on K60 Kong Yufang, Zhao Xia, Yang Zhifei(67)

Design of Vehicle Control Signal System at Fixed Meeting Point of Single Lane in Coal Mine Ren Jifeng, Li Feng(70)

Application of industrial robots in the stamping automated production lines Chen Ying(73)

Design of the flow cell of turbidity sensor Yu Ming, Tang Yunjian(75)

Research and Application of Frequency-domain Dielectric Spectroscopy of Oil-paper Insulation for Transformers Liu Ling, Wang LinNa(77)

Application of automatic control system of screen door in Metro station He Lijuan(80)

Design and implementation of high-precision serial A/D and D/A converter chips interface based on TMS320F28335 Li Dongmei, Hu Rui(82)

The environmental monitoring system based on four rotor unmanned aerial vehicle (uav) Yan Xiaoxin, Zhang Hang, Zhou Xin, Zhang Shuai, Qiu Ziyang, Zhou Guoqing(85)

Investigation of undetected defects in stainless steel cladding area of Reactor Vessel Ma Shaoliang(87)

Analysis on maintenance measures of instrument automation equipment in petrochemical industry Zhang Yuzhong(89)

Numerical simulation and analysis of clearance cavitation in screw centrifugal pump Yang Wenjie(91)

The treadmill gait feature acquisition system based on flexible array pressure sensing technology Liu Yefei(93)

Magnetic locking device based on permanent magnetic transmission equipment	Zhou longde, Ban Wanben(95)
Nuclear fuel component tester multi-axis motion control system of technology improvement	Wang Bin(96)
The Design Of Mud Pulser's Control System Based On BLDC Motor	Liang Yao, Li Chuanwei, Dai Zhiping, Ao Yun, Liu Ronghua(99)

MANAGEMENT AUTOMATION

Research on automatic testing technology of highway Pavement	Huang Juan(102)
Research of mobile clinical nursing system based on RFID Technology	Wu Jianfei, Zhou Luming(104)
Research on physical training attendance system of RFID	Sun Weihua(107)
Research on the accounting computerization system of small and medium sized enterprises based on B/S structure	Yang Dan(109)
Research on Security Management of Campus Network in Higher Vocational School Based on Encryption Technology	Liu Jiang, Chen Qi(111)
Cloud-based platform in Sewage Treatment Plant Control System	Zhang Ziyi, Luo Dongsong, Jiang Wei(113)
The 24 v dc power supply of west-east gas insulation monitoring system applied research	Huang Jianfa, Ma Qingsheng, Hu Tianming, Deng Zhenwei, Feng Youqi(115)
Design of Remote Software for Floating Body Heading Modulating System in Target Ship	Wang Haitao, Qin Gang(117)
Design of chronic disease monitoring system based on Internet of things	Guo Jing, Fan Hujie(119)
The design of the intelligent logistics support system in our country	Liu Haibin(121)
A Service Oriented Architecture for Resource-constrained Devices	Wang Yi, Fu Hong, Qiu Lin, Xia Haiyan(123)
The development and application of information management system for bidding of electric power supplies	Zhao Yong(127)
Based on analysis of Bank Landslide automatic monitoring system of networking technology	Chen Yinfeng, Ma Changling(129)
Detection and recognition technology of Expressway Pavement Distress	Wang Yulong(131)
The Virtual Management of Stadiums Based on Intelligent Agent Technology	Li Weixing(133)

LABORATORY AUTOMATION

Research on a new 1D chaotic system	LI Juanxia, Sun Huiming, Chen Wei(135)
Study of a new type of viscosity measurement system	Ma Li(139)
Research on Security Technology Based on Modularization and Cloud Storage	Gao Fei, Tang Xiaoqiang(141)
Research on the design of power electronic converter circuit model based on Simulink	Wang Yueai, Wang Bo(144)
Research on the construction scheme of multimedia voice room	Fan Ningjie(146)
Research on Network information security under the background of large data	Yang Yan, Zhang Ying(149)
Logistics Simulation of Trailer Production line Based on Flexsim	Qin Cheng, Cheng Xuesheng, Zhang Daoxing, Sheng Junde(151)
Research on Intelligent English teaching system based on the intelligent network system	Ren Beibei(153)
Research on the privacy preserving data mining in distributed environment	Liu Xiaodan(155)
Study of Physical Education Teaching based on Kinect	Yang Zhiqiang(157)
Research on Improved Network Security Evaluation Method of Fuzzy AHP	Yang Linhui, Sun Shaohua, Sun Xiaodong(159)
Research on the application of computer in cost accounting	Liu Li(161)
Research on Computer Forensics Technology Based on Network Security	Yu Lin, Ding Mi(164)
Research on the key technology of massive data distributed storage based on Hadoop	Yang Xiaoyan(166)
The design of the landscape platform for mobile devices and research	Qiao Guona(168)
Based on the technology of Zigbee wireless set copy system data mining and the software design	Su Xianle, Zhang Yanqu(170)
Based on the Access database and the general community sports management system framework of net structure design	Liu Zhongju(173)
The Design of basketball competition management system based on automation technology	Xie Xintao(175)
Design of dynamic hybrid virtual network framework for proactive intrusion prevention	Duan fei(177)
Design and Implementation of the Anonymous Scoring System Based on a Network	Wang Huabin(179)
Marketing system and application of multilayer distributed architecture design	Zhang Haiyun(181)
Analysis and application of IPv4 to IPv6 transition technology in campus network	Tian Aibao(183)
Based structural equation 4S Automobile shop customer satisfaction evaluation model research and Application	Sun Yan(185)
Application of artificial intelligence (AI) technology in human resource management information system	Long Yanjun(187)
The Application of binocular vision technology in human computer interactive sports	Xue Yadong(189)
Explore oblique angle of 45 degrees in the automation HMI application software	Li Mingchun(191)
Through the analysis of educational data mining and learning to promote teaching and learning	Ren Qingdong, Wang Lulu(193)
Analysis on fourier Series of PWM Signal and Matlab Simulation	Zhang Chengjiao, Xie Shaowei(195)
Based on the feature of the nucleus of cervical cancer cell image identification and classification	Ning Ziyu, Luo Wei, Li Yan, Lu Pengju, Li Meng(197)
Analysis of computer architecture software simulation technology	Huang Yongfei(200)
Modeling and simulation verification method for the mobile Ad Hoc network survivability model	Xin Jianjun(202)
The network security detection model based on improved genetic algorithm and system building	Zeng Zhaomin(204)
Research on the Students' Physical Fitness Test Automation System	Shi Wensheng(206)
Design and implementation of a smart home system based on location service	Zhang Jian(208)
A Hybrid Electric Power Data Processing Model	Xu Yuanbin(210)
The Internet of things intelligent push logistics analysis of the key factors	Li Yinlong(214)
Analysis of the characteristics of low voltage power line carrier communication channel	Zhao Yonghui, Zhang Jianwei, Li Shilin, Yang Ming, Yang Hao(216)
The study on recognition Human Motion monitoring actions based on somatosensory network	Liang Yuan(219)
Research on the self monitoring function of the intelligent phone fitness App	Cai Jingjing(221)
Based on the safety of wisdom campus IC card technology research	Fan Yingjun(223)

AUTOMATION

Design of an intelligent medical system based on Web Technology	Zhang Zeyue, Luo Junbo, Yang Fang, Sun Qiang, Yi Xianfu, Ji Xiaoshan(225)
Intelligent home remote monitoring system based on Web and GPRS	Zhang Wanliang(227)