

目 次

学 术 论 文

基于图像处理的三峡库区水域水华检测算法及预警研究	石为人	贾承晖	王 楷	(2641)
故障分类时环境强化试验的可靠度近似置信限	郭建英	孙永全	王铭义	陈洪科(2648)
基于 DSP 的红外标志点实时跟踪方法研究	刘 鑫	王涌天	刘 越	(2654)
基于正交匹配追踪的周期非均匀采样研究	罗浚溢	田书林	王志刚	朱肇轩(2661)
紫外臭氧垂直探测仪波长精度分析与波长定标新方法的研究			林冠宇	(2668)
一种高性能单精度浮点基-3 蝶形运算单元的设计与实现	禹霁阳	李 阳	黄 丹	龙 腾
基于多源信息融合的膝上假肢步态识别方法	高云园	余青山	孟 明	罗志增(2682)
超声波 TOF 的递推相关估计			赵正敏	李洪海(2689)
嵌入式 GPS/MIMU/磁罗盘组合导航系统	蔡体菁	刘 莹	宋 军	刘 勇
双足机器人稳定步行模式的预测控制实现方法	敬成林	薛方正	张 华	李祖枢(2700)
基于波达方向估计的相对位姿测量系统	王 韬	石为人	杨力生	付连庆
自适应 Morlet 小波降噪方法及在轴承故障特征提取中的应用	蒋永华	汤宝平	董绍江	(2712)
参数不确定时滞系统分数阶 $PI^{\lambda}D^{\mu}$ 控制器稳定域算法			梁涛年	陈建军(2718)
基于广义证据一致量和信息量因子的证据组合规则	韩 东	李洪儒	许葆华	(2724)
基于小波包熵和支持向量机的运动想象任务分类研究	王艳景	乔晓艳	李 鹏	李 刚(2729)
基于最大提升格形态小波变换的齿轮故障特征提取	张培林	李 兵	张英堂	米双山
基于分形理论的便携式故障诊断系统的设计与开发			郝 研	王太勇(2742)
大尺度三维视觉测量中的离焦模糊图像恢复	张益昕	王 顺	张旭苹	(2748)
一种在分形编码图像中嵌入盲灰度水印的方法			黄晓晴	于盛林(2754)
基于 CWT 二次图像的缸套-活塞环摩擦振动分析研究	黄朝明	于洪亮	关德林	李国宾(2761)
基于小波和混沌映射的函数水印算法			彭玉楼	何怡刚(2768)
一种基于改进 Hough 变换的直线快速检测算法	段汝娇	赵 伟	黄松岭	陈建业(2774)
导弹发动机壳体粘接质量红外热波检测	杨正伟	张 炜	武翠琴	田 干
基于 TMS320F28335 的高精度科氏质量流量变送器研制	侯其立	徐科军	李 叶	朱永强
一种透皮无创血糖检测系统的设计与实验验证	肖宏辉	常凌乾	杨庆德	贺银增
新型 128 导大脑磁刺激仪的研制	周 鹏	贺威忠	王学民	林冬冬
基于闪光视觉诱发电位的颅内压无创检测及其仪器实现	季 忠	彭承琳	杨 力	(2809)
基于雷达截面差值的标签通信误码率分析和测量	李 兵	何怡刚	余 开	侯周国
多小区 MIMO 系统中的分布式预编码研究	邹应全	李春国	赵 睿	杨绿溪(2821)
预启式调节阀振动的试验研究	马玉山	傅卫平	屠 珊	石月娟
工业过程时滞现象的补偿与控制			王启志	王晓霞(2836)
基于源牵引的射频识别芯片的阻抗及灵敏度测量	靳 钊	庄奕琪	乔丽萍	刘伟峰
带图像处理的火灾报警系统抗干扰性研究			陈晓娟	卜乐平
一种基于 Rake 结构的 GNSS 多径信号捕获方法	孙晓文	张淑芳	姜 毅	胡 青
基于独立分量分析的绝缘子泄漏电流取样方式的研究			徐志钮	律方成(2861)

研究通讯

基于协同簇与模糊评判的无线传感器网络转发协议	李玉凯	白 焰	方维维	高喜奎(2867)
脉冲漏磁检测技术中传感器性能影响因素研究	唐 莺	潘孟春	罗飞路	(2875)

CHINESE JOURNAL OF SCIENTIFIC INSTRUMENT

VOLUME 31 NUMBER 12 December 2010

CONTENTS

Research on water bloom detecting algorithm and early warning based on image processing for Three Gorges Reservoir area	Shi Weiren, Jia Chenghui, Wang Kai(2641)
Reliability approximate confidence limits of environmental enhancement testing in failure classification	Guo Jianying, Sun Yongquan, Wang Mingyi, Chen Hongke(2648)
Study on a real-time infrared marker tracking method based on DSP	Liu Xin, Wang Yongtian, Liu Yue(2654)
Orthogonal matching pursuit based periodic non-uniform sampling	Luo Junyi, Tian Shulin, Wang Zhigang, Zhu Zhaoxuan(2661)
Analysis of wavelength accuracy and study on new wavelength calibration method for ultraviolet ozone vertical probe	Lin Guanyu(2668)
Design and implementation of high speed single precision floating-point radix-3 butterfly unit	Yu Jiyang, Li Yang, Huang Dan, Long Teng, Liu Wei(2675)
Recognition method based on multi-information fusion for gait patterns of above-knee prosthesis	Gao Yunyuan, She Qingshan, Meng Ming, Luo Zhizeng(2682)
Recursive cross-correlation estimation of ultrasound TOF	Zhao Zhengmin, Li Honghai(2689)
Embedded integrated GPS/MIMU/compass navigation system	Cai Tijing, Liu Ying, Song Jun, Liu Yong, Zhu Yanhua(2695)
Implementation method of predictive control for biped robot stabilization walking pattern	Jing Chenglin, Xue Fangzheng, Zhang Hua, Li Zushu(2700)
Relative position and attitude determination system based on direction of arrival estimation	Wang Tao, Shi Weiren, Yang Lisheng, Fu Lianqing, Cao Hailin(2706)
Denoising method based on adaptive Morlet wavelet and its application in rolling bearing fault feature extraction	Jiang Yonghua, Tang Baoping, Dong Shaojiang(2712)
Algorithm for stability region of parameter uncertain system with time delay using fractional-order $PI^{\lambda}D^{\mu}$ controller	Liang Taonian, Chen Jianjun(2718)
Combination rule of evidence based on general evidence consistency degree and information content factor	Han Dong, Li Hongru, Xu Baohua(2724)
Classification of motor imagery task based on wavelet packet entropy and support vector machines	Wang Yanjing, Qiao Xiaoyan, Li Peng, Li Gang(2729)
Max-lifting morphological wavelet transform based gear fault feature extraction	Zhang Peilin, Li Bing, Zhang Yingtang, Mi Shuangshan, Liu Dongsheng(2736)
Design and development of portable fault diagnosis system based on fractal theory	Hao Yan, Wang Taiyong(2742)
Defocused blur image restoration in large scale 3D vision measurement	Zhang Yixin, Wang Shun, Zhang Xuping(2748)
New method for embedding blind gray watermark into fractal coding image	Huang Xiaoping, Yu Shenglin(2754)
Study on frictional vibration of cylinder-piston ring with CWT image	Huang Chaoming, Yu Hongliang, Guan Delin, Li Guobin(2761)
Functional watermarking algorithm based on wavelet transform and chaotic map	Peng Yulou, He Yigang(2768)
Fast line detection algorithm based on improved Hough transformation	Duan Rujiao, Zhao Wei, Huang Songling, Chen Jianye(2774)
Infrared thermography applied to evaluate adhesive quality of missile motor shell	Yang Zhengwei, Zhang Wei, Wu Cuiqin, Tian Gan, Song Yuanjia(2781)
Development of high-accuracy Coriolis mass flow transmitter based on TMS320F28335	Hou Qili, Xu Kejun, Li Ye, Zhu Yongqiang, Li Miao(2788)
Development and experiment of a glucose monitor using noninvasive transdermal extraction	Xiao Honghui, Chang Lingqian, Yang Qingde, He Yinzeng, Cai Xinxia(2796)
Development of new-type 128-channel brain magnetic stimulator	Zhou Peng, He Weizhong, Wang Xuemin, Lin Dongdong, Wang Mingshi(2803)
Instrument realization of non-invasive intracranial pressure measurement based on flash visual evoked potential	Ji Zhong, Peng Chenglin, Yang Li(2809)
Analysis and measurement of bit error rate for tag communication based-on delta radar cross section	Li Bing, He Yigang, She Kai, Hou Zhouguo, Zuo Lei(2815)
Distributed precoding for multicell MIMO networks	Zou Yingquan, Li Chunguo, Zhao Rui, Yang Lvxi(2821)
Experimental study on vibration of pilot-cage type control valve	Ma Yushan, Fu Weiping, Tu Shan, Shi Yuejuan, Dong De(2828)
Time-delay compensation and control for industrial process	Wang Qizhi, Wang Xiaoxia(2836)
Source-pull based impedance and sensitivity measurements of UHF RFID chips	Jin Zhao, Zhuang Yiqi, Qiao Liping, Liu Weifeng, Tang Longfei, Li Bing(2842)
Research on anti-jamming performance of fire detection system with image information	Chen Xiaojuan, Bu Leping, Yang Jiajun(2848)
GNSS multipath signal acquisition method based on Rake architecture	Sun Xiaowen, Zhang Shufang, Jiang Yi, Hu Qing(2854)
Study of insulator leakage current sampling based on independent component analysis	Xu Zhiniu, Lv Fangcheng(2861)
Delivery protocol for wireless sensor networks based on collaborative cluster and fuzzy comprehensive evaluation	Li Yukai, Bai Yan, Fang Weiwei, Gao Xikui(2867)
Study on effect factors of sensor performance in pulsed magnetic flux leakage testing	Tang Ying, Pan Mengchun, Luo Feilu(2875)