

主 管	江西省科学技术厅
主 办	江西省计算机学会 江西省计算技术研究所
编辑出版	《计算机与现代化》编辑部
编辑委员会	
顾 问 (按姓氏笔划为序)	
朱龙发	陈 征 周定康
倪国熙	聂承启 魏国汶
主任	刘波平
副主任 (按姓氏笔划为序)	
李建民	杨国强
罗 敏	薛锦云
编 委 (按姓氏笔划为序)	
万常选	王明文 王命延 吕任东
刘党夫	刘顺潮 汤 彬 孙 涌
宋利康	杜建强 李广振 杨宇仙
何火娇	张万斌 张俊民 张嗣忠
苑鸿骥	赵应丁 胡剑锋 徐升华
陶俊才	涂彦彬 龚琪琳 舒 坚
编 辑 部	
主 编	刘波平
副 主 编 (按姓氏笔划为序)	
李建民	杨国强
罗 敏	薛锦云
责 任 编辑	刘顺潮
计算机与现代化	
(月刊,1985年创刊)	
本刊地址	南昌市井冈山大道1416号
邮 政 编 码	330002
电 话	0791-6490996
传 真	0791-6492535
网上投稿网址	www.c-a-m.org.cn
E-mail	jgsdd@163.com
印 刷	江西省和平印务有限公司
发 行	江西省邮政局
订 阅	全国各地邮局(所)
邮发代号	44-121
定 价	20.00元 全年 240.00元
刊 号	ISSN 1006-2475 CN36-1137/TP

目 次

人工智能

- 智能规划的通用问题描述进展 刘吉,迟学航,吕帅(1)
基于径向基函数网络的农作物疾病诊断技术研究 陈晓艳,董朝铁,刘月文(5)

计算机控制

- 基于单片机和步进电机的高精度位移控制装置设计 周子平,胡清(9)
一种基于FPGA的多通道数据采集系统的性能分析方法 罗洪霞,张雪峰(12)

- 磷酸铁锂电池的保护监测系统分析 涂萍,胡文松(16)

图像处理

- 月球表面图像的SIFT特征提取与匹配 陈坤,王璐,储珺(20)
基于Gabor滤波的指纹图像识别研究与实现 张新森(24)

- 基于混沌系统和分数阶傅里叶变换的图像加密算法 左敬余,余桂兰,崔得龙(27)

- 基于嵌入式Linux的视频采集系统设计 黎燕霞(30)

- 基于一维傅里叶变换特征提取的纸币识别 尹惠玲(34)

- 一种消除阶梯效应的图像分解新模型 陈花竹,李小丽(36)

- 背景提取和平水集相结合的运动目标轮廓提取方法 于若飞(40)

网络与通信

- 面向无线多跳网络的TCP协议改进研究综述 刘梅(45)

- ASP.NET环境下Hessian协议Web服务技术的研究 董婕,覃华(49)

- 基于主题定制的专利网络爬虫的设计与实现 张睿涵,林振荣,李建民,袁湾(52)

- 基于CTP的网格服务快速开发技术研究 马赛红,朱爱红,李连(60)

- 基于ActiveX控件技术的B/S模式下公文处理的研究与实现 韩梅,林振荣,李建民(64)

- 中尺度气象站网探测数据的UDP报文传输方法分析与研究 钱毅,陈斌,方海涛,姜志平(67)

- 基于P2P的即时通信系统的设计 李振汕(71)

- 基于B/S模式的信息交互系统的设计与实现 周蕾(75)

- 基于MX27的嵌入式RTSP手机流媒体服务器的设计与实现 黄德辉,梁鹏,曾华(78)

- 以用户体验为基础的网站优化策略 毛冠婧,黄建铭(82)

算法设计与分析

- 一种基于MPI与OpenMP的矩阵乘法并行算法 张艳华,刘祥港(84)

- 基于机器视觉的大豆热损伤粒检测 高艳霞,胡昌标(88)

- 基于边缘算子的有效子序列分割方法 孙达辰,孙迎燕,周广群(92)

- 融合VSM技术的PageRank算法研究与应用 李卫东,陆玲(96)

- 一类三角模的结构性分析 易志洪(99)

- 元胞自动机可逆性研究 刘栋(102)

- 正则表达式匹配引擎性能分析 邓凯元,姜磊(105)

- 对一种ECDSA改进算法的攻击 周才学,周顽,胡慧(108)

- 软件保护策略比较研究 董清潭(111)

软件工程

- 云计算在电子政务系统中的应用研究 吴秋萍(116)

- 基于专家经验和随机抽样的早期快速估算方法 朱安江,何鸿君,尹俊文,刘庆和,周鹏,买新晖(121)

- 简约企业架构 李峰(126)

- 用方面化特征模块开发OpenRISC1200软核 吴斌,叶俊(130)

- 一个基于Mathematica平台的程序安全性自动验证工具 田丰,邢建英(136)

计算机仿真

- 基于UML的雷达电磁环境仿真系统建模 张杨,洪丽娜,石川(140)

- 动态燃油消耗模拟分析与设计 谭沧海(144)

计算机辅助教学

- 基于B/S架构的电子学档系统设计与实现 林瑜华(147)

- 基于WebOffice控件的网络考试系统开发 洪增斌,周剑敏(151)

- 基于J2EE的在线作业管理系统设计与开发 刘珍,杨胜斌,张锦鸿(154)

数据库与数据挖掘

- 基于GIS的南海动力环境系统的设计与技术实现 王文涛,李洪平(157)

- 基于Web的智能报表设计研究 冼进(161)

- 基于分布式数据库的高校设备管理系统的建设与实现 赵昕,崔静(165)

- 基于ADO.NET的数据库连接池技术的优化研究 朱子江,胡毅,刘东(168)

- 文本特征选择算法MI的改进 方志龙(172)

- 粗糙集理论在医学数据挖掘中的研究与应用 刘秀峰,陈振虎,詹秀菊(176)

应用与开发

- 我国旅游电子商务模式创新研究与平台设计 于平,逯燕玲(179)

- 基于UML的开放式实验实训中心预约系统的分析与设计 岳文闻,肖新元(183)

- AutoCAD中的“放样”在叉架类零件三维造型设计中的应用 郭平(186)

- 基于中间件的档案管理系统接口平台设计 张伟娜(189)

- 基于BP神经网络的旅游突发事件文本分类系统的设计与实现 刘新生,厉锐(192)

- 尿沉渣分析系统的设计与实现 庄玲盈,文俊浩,杨丹(195)

- 一种基于Linux的图形用户接口的设计与实现 吴春祥(199)

- 小额交易中SET协议的优化及SPIN验证的研究 温炽亮(201)

Sponsor

Jiangxi Computer Federation

Jiangxi Institute of Computing Technology

Editor and Publisher

Editorial Department of

Computer and Modernization

Editor in Chief LIU Bo-ping**Associate Editor in Chief**

LI Jian-min YANG Guo-qiang

LUO Min XUE Jin-yun

Responsible Editor LIU Shun-chao**COMPUTER AND MODERNIZATION**

(Monthly, Started in 1985)

Address Jinggangshan Road No.1416,

Nanchang 330002, Jiangxi, China

Tel. 0791-6490996**Fax** 0791-6492535**Website** www.c-a-m.org.cn**E-mail** jgsdd@163.com**Distributor** Jiangxi Province Post Bureau**Issue Code** 44-121**Price** ¥20.00**ISSN** 1006-2475
CN36-1137/TP**CONTENTS****ARTIFICIAL INTELLIGENCE**

- General Problem Descriptions Progress of Intelligent Planning LIU Ji, CHI Xue-hang, LU Shuai(1)
 Study of Diagnosis for Diseases of Agricultural Crops Based on Radial Basis Function Networks CHEN Xiao-yan, DONG Chao-ji, LIU Yue-wen(5)

COMPUTER CONTROL

- Design of High-precision Displacement Control Device Based on MCU and Stepper Motor ZHOU Zi-ping, HU Qing(9)
 Performance Analysis Method of Multi-channel Data Acquisition System Based on FPGA LUO Hong-xia, ZHANG Xue-feng(12)

- Analysis of Lithium Iron Phosphate Battery Protection and Monitoring System TU Ping, HU Wen-song(16)

IMAGE PROCESSING

- SIFT Feature Extraction and Matching of Lunar Surface Image CHEN Kun, WANG Lu, CHU Jun(20)
 Research and Implementation of Fingerprint Image Recognition Based on Gabor Filtering ZHANG Xin-miao(24)
 An Image Encryption Algorithm Based on Chaotic System and Fractional Fourier Transform ZUO Jing-long, YU Gui-lan, CUI De-long(27)

- Design of Video Capture System Based on Embedded Linux System LI Yan-xia(30)

- Currency Recognition Based on Feature Extraction of One Dimension Fourier Transform YIN Hui-ling(34)

- A Kind of New Decomposition Model for Staircase Reduction CHEN Hua-shu, LI Xiao-hu(36)

- Extraction Method of Moving Object Contour Using Background Extraction and Level Set YU Ruofei(40)

NETWORK AND COMMUNICATION

- Survey of TCP Improvement over Wireless Multi-hop Networks LIU Mei(45)

- Research on Web Service Technology Based on Hessian Protocol in ASP.NET Environment DONG Jie, QIN Hua(49)

- Design and Implementation of Patent Crawler Based on Customized Theme ZHANG Rui-han, LIN Zhen-rong, LI Jian-min, ZHONG Wan(52)

- Research on Quick Developing Technology of Grid Service Based on GT4 YU Ming-gang, ZHOU Jie, WANG Meng-lei(56)

- Research and Realization of Documents Processing in B/S Mode Based on ActiveX Control Technology MA Sai-hong, ZHU Ai-hong, LI Lian(60)

- Design of Privilege Mechanism Based on Expansion of Membership HAN Mei, LIN Zhen-rong, LI Jian-min(64)

- Analysis and Research on Data Transmission by UDP Packet for Mesoscale Meteorological Observing Network QIAN Yi, CHEN Bin, FANG Hai-tao, JIANG Zhi-ping(67)

- P2P-based Design of Instant Messaging System LI Zhen-shan(71)

- Design and Implementation of Information Interactive System Based on B/S Framework ZHOU Lei(75)

- Design and Implementation of Mobile Phone Embedded RTSP Streaming Media Server Based on MX27 HUANG De-hui, LIANG Peng, ZENG Hua(78)

- Strategies of Website Optimization Based on User Experience MAO Guan-qiang, HUANG Jian-ming(82)

DESIGN AND ANALYSIS OF ALGORITHM

- Parallel Algorithm of Matrix Multiplication Based on MPI & OpenMP ZHANG Yan-hua, LIU Xiang-gang(84)

- Inspection of Heat-damaged Soybean Based on Machine Vision GAO Yan-xia, HU Chang-biao(88)

- Segmentation Algorithm for Effective Subsequence Based on Edge Operator SUN Da-chen, SUN Ying-yan, ZHOU Guang-qun(92)

- Research and Application of PageRank Algorithm Combined with VSM Technique LI Wei-dong, LU Ling(96)

- Structural Analysis of a Kind of Triangular Norms YI Zhi-hong(99)

- Research on Reversibility of Cellular Automata LIU Dong(102)

- Performance Analysis of Different Regular Expressions Matching Engines DENG Kai-yuan, JIANG Lei(105)

- Attack on an Improved Algorithm of ECDSA ZHOU Cai-xue, ZHOU Wan, HU Hui(108)

- Comparative Study of Software Protection Strategy DONG Qing-tan(111)

SOFTWARE ENGINEERING

- Application and Research on Cloud Computing in E-Government System WU Qiu-ping(116)

- Early and Quick Estimation Based on Expert Experience and Random Sampling ZHU An-jiang, HE Hong-jun, YIN Jun-wen, LIU Qing-he, ZHOU Peng, MAI Xin-hui(121)

- Concise Enterprise Architecture LI Feng(126)

- Re-development of OpenRISC1200 Soft Core with Aspectual Feature Module WU Bin, YE Jun(130)

- A Tool for Automated Safety Verification on Mathematica TIAN Feng, XING Jian-ying(136)

COMPUTER SIMULATION

- Modeling of Electromagnetic Environment Simulation for Radar Based on UML ZHANG Yang, HONG Li-na, SHI Chuan(140)

- Simulation Analysis and Design of Dynamic Fuel Consumption TAN Cang-hai(144)

COMPUTER AIDED INSTRUCTION

- Design and Implementation of E-portfolio System Based on B/S Structure LIN Yu-hua(147)

- Development of Network Examination System Based on WebOffice Control HONG Zeng-bin, ZHOU Jian-min(151)

- Design and Development of Online Assignment Management System Based on J2EE LIU Zhen, YANG Sheng-bin, ZHANG Jin-hong(154)

DATABASE AND DATA MINING

- Design and Technology Realization of Hydrodynamic Environment System in South China Sea Based on GIS WANG Wen-tao, LI Hong-ping(157)

- Design and Research on Web Reports Based on Multi-database and Complicated Statistics XIAN Jin(161)

- Design and Implementation of Management System of College Equipment Based on Distributed Database ZHAO Xin, CUI Jing(165)

- Optimization Study of Database Connection Pool Technology Based on ADO.NET ZHU Zi-jiang, HU Yi, LIU Dong(168)

- Improvement of Mutual Information of Feature Extraction FANG Zhi-long(172)

- Research and Application of Rough Sets Theory in Medical Data Mining LIU Xiu-feng, CHEN Zhen-hu, ZHAN Xiu-ju(176)

APPLICATION AND DEVELOPMENT

- Model Innovation and Platform Design of Tourism E-business in China YU Ping, LU Yan-ling(179)

- Analysis and Design of Booking System for Opening Experiment and Training Center Based on UML YUE Wen-wen, XIAO Xin-yuan(183)

- Application of Loft in Frame Center Crank Parts Three-dimensional Design GUO Ping(186)

- Design of File Management System Interface Platform Based on Middleware ZHANG Wei-na(189)

- Design and Implementation of Tourism Events Text Classification System Based on BP-NN LIU Xin-sheng, LI Kun(192)

- Design & Implementation of Urine Sedimentary System ZHUANG Ling-ying, WEN Jun-hao, YANG Dan(195)

- Design and Implementation of a Graphic User Interface Based on Linux WU Chun-xiang(199)

- Research on SET Protocol Optimization and Verification of SPIN in Small Amount of Transactions WEN Chi-liang(201)