

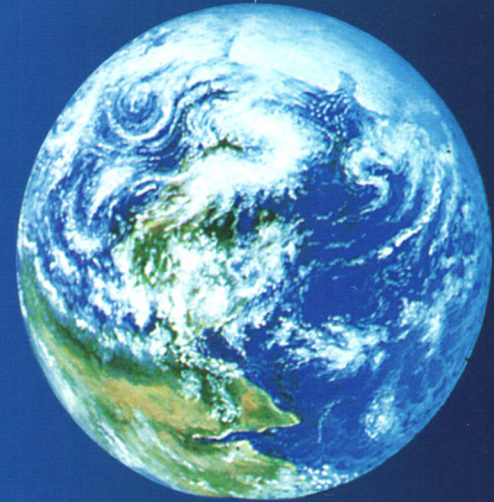


中文核心期刊  
中国计算机用户协会会刊

ISSN 1006-9348

# 计算机仿真

## COMPUTER SIMULATION



1101001011110100  
1011000101111  
01011101001010101

ISSN 1006-9348



9 771006 934033

万方数据

2  
2016

## 目次

## 综述

- 机器人及其仿真 ..... 徐庚保, 曾莲芝(1)
- 航天产品数字样机概念研究 ..... 韩喜, 赵英杰, 杨贺, 史阿云(6)
- 反舰导弹制导技术发展综述 ..... 刘永, 杨健, 朱剑, 张如飞(10)

## 军事领域仿真

- 某空降自行火炮着陆过程动力学仿真研究 ..... 何健, 马吉胜, 吴大林, 邓士杰(17)
- 距离选通超分辨率三维成像同步控制的研究 ..... 卢德贞, 范松涛, 王新伟, 周燕(22)
- 爆炸冲击载荷作用下混凝土墙动态响应分析 ..... 李伟建, 郑晴(27)
- 混响室雷达杂波模拟器设计与仿真 ..... 涂鹏, 梁玉英, 韩壮志(32)
- 新型光电装备延伸保修成本判断 ..... 邹效, 贾云献, 李欣玥, 李跃江(37)
- 相位式激光测距系统优化设计及仿真 ..... 张小鸣, 王燕萍(41)
- 基于排队论的装甲装备保障维修任务调度研究 ..... 杜家兴, 陈财森, 童继凤, 武剑乐(47)
- 欠驱动无人两栖平台镇定控制策略研究 ..... 华玉龙, 孙伟, 迟宝山, 刘国强(52)

## 航空航天领域仿真

- 航空发动机控制系统传感器故障诊断仿真研究 ..... 王涛, 薛薇, 吕淮北(56)
- 飞机座舱压力控制系统实时建模与仿真 ..... 付龙飞, 田广来, 梁波, 石麒(61)
- 高速飞行器快速飞行采集图像小区域分割仿真 ..... 罗集宁, 战荫伟(65)
- 飞行仿真转台控制器性能评价研究 ..... 刘慧博, 吴浩(69)
- 航天器控制系统方案设计平台 ..... 林瀚崢, 胡海霞, 汤亮(73)
- 关于无人机导引律优化控制与仿真研究 ..... 吴俊辰, 王洁, 徐啟云, 杨景(78)
- 战斗机近距引导瞄准参数误差分析 ..... 黄伟, 徐建城, 吴华兴, 李俊兵(83)
- 关于飞行器的电动舵机伺服系统参数辨识 ..... 马敏, 周盛春, 王伯波, 薛倩(88)
- 飞机防滑刹车系统控制器优化设计 ..... 刘文胜, 许丰瑞, 马运柱, 陈梦樵(93)
- 空间电源最大功率跟踪控制仿真分析 ..... 赵敏, 王骞, 李铁才, 王子才(99)
- 无人机飞行器飞行数据的故障挖掘算法仿真 ..... 张志彦, 李俊峰, 赵军(103)
- 关于防空导弹引导律优化控制仿真研究 ..... 徐兴元, 乔俊玲, 蔡远利(107)
- 基于扰动抑制的四旋翼飞行器跟踪控制 ..... 韩笑, 廖粤峰(111)
- 基于递归小波神经网络的无人机反演控制 ..... 刘斌, 王洁, 何广军, 徐啟云(116)
- 飞机客舱内人体热舒适性环境优化控制 ..... 林家泉, 刘永辉, 陈维兴, 李宗帅(122)
- 飞行器临近空间通信信号传输特性研究 ..... 凌云飞, 陈长兴, 蒋金(127)
- 基于压缩传感的SRM断面图像重建方法研究 ..... 宋家慧(132)
- 飞行移动平台成像匹配的电子稳像技术研究 ..... 谢征, 崔少辉(138)

## 能源领域仿真

- 关于风力发电系统效率优化控制研究 ..... 陈明霞, 曾宇(142)
- 基于电路分析的串并联光伏阵列特性研究 ..... 张俊红, 魏学业, 胡良(147)
- 电网输电过程谐波电流检测方法研究 ..... 余发山, 王要东, 刘倩, 康洪(153)
- 火山岩气井井壁破坏预测可视化研究 ..... 杨柳, 葛洪魁, 申颖浩, 周彤(158)
- 基于增量优化极限学习机的电力负荷预测 ..... 宁晓光, 朱永利(163)
- 关于精馏塔底温度优化控制仿真研究 ..... 李瑞红, 刘朝晖, 赵申东(167)
- 电力系统供电负荷短期预测模型设计 ..... 唐鉴, 丛杨, 高宏伟(171)
- 电力系统短期负荷预测建模仿真研究 ..... 王惠中, 刘轲, 周佳, 王岳锋(175)
- 大型火电机组协调系统的线性自抗扰控制 ..... 陈宇, 张锐锋, 徐贵光, 聂海龙(180)
- 船舶主机余热热发电系统建模与仿真 ..... 徐晟, 王锡淮, 陈晨, 肖建梅(185)
- 基于数据驱动的主汽温度改进灰色预测PID控制 ..... 胡文斌, 伍宇鹏, 程海燕, 陈红保(190)

## 交通体系与工具仿真

- 关于交通流量数据预测建模研究 ..... 王秋平, 舒勤, 黄宏光(194)
- 无人驾驶智能车导航系统控制研究 ..... 段建民, 石慧, 刘丹, 于宏啸(198)
- 车辆拥堵状态下的最优路径规划建模研究 ..... 王润芳, 时庆涛(204)
- 夜间不定车速环境下的优化调度模型分析 ..... 李龙(207)
- 道路交通合流区换道行为仿真研究 ..... 王百里, 杨晓芳, 刘红杏(211)

## 信息仿真

- 粗糙度对矩形巷道电磁波传播特性影响的仿真 ..... 张冰丽, 成凌飞, 高慧, 贾琳(216)

非对称无线传输信道的音视频同步优化设计 .....	马宏雷,刘儿兀,朱 军(221)
基于博弈论的中继系统功率分配 .....	李 洲,周 雯(227)
高性能 CIC 滤波器的优化设计 .....	刘国稳,朱卫华(234)

### 仿真应用研究

基于偏最小二乘法的功放识别与预失真设计 .....	袁东明,刘 波,孙 辉(239)
基于相似定律的鼓风机温度补偿优化策略 .....	王红君,郑书轩,赵 辉,岳有军(244)
用于电能质量分析的电弧炉混合模型研究 .....	赵 辉,吕新亚,王红君,岳有军(248)
粮库气力输送机供料器设计与优化 .....	文桂林,何智翔,卿启湘,邹伟生(254)
整流电路中 LC 滤波器浪涌电压的可视化分析 .....	伍家驹,李 晨,王长坤(261)
大功率电磁加热系统的散热设计 .....	樊 波,李 玲(265)
图像分割的自适应快速水平集演化模型 .....	王 艳(269)
基于改进子空间方法的管式加热炉系统辨识 .....	陈在平,程 贇,贾 超(273)
基于梅尔频率倒谱系数的球磨机料位软测量 .....	寄珊珊,郭 磊,续欣莹,阎高伟(277)
船舶中污水处理油水分离器优化仿真研究 .....	李宗泽,史成军(281)
超肥胖人群的下肢运动特征的图像分割仿真 .....	刘二钢,黄荣芳(286)
费托合成反应器温度稳定性控制研究 .....	李 复(290)
纯碱管式气流干燥器效率优化控制研究 .....	郭仁宁,段乐乐,马 冶,赵立柱(295)
鸭嘴形气固喷射器三维仿真分析及优化 .....	王朋辉,胡永彪(299)
电流源驱动的异步电动机调速特性及仿真研究 .....	国 珍,张加胜,刘 伟(304)
关于海底 S 型管道铺设形态分析仿真研究 .....	咎英飞,韩端锋,袁利毫(308)

### 仿真方法与算法

一种融合差分进化的量子粒子群优化算法 .....	张 兰,聂玉峰(313)
--------------------------	--------------

### 仿真软件

石油钻井井架安全性评价可视化软件设计 .....	张 颖,练章华,周兆明,周 溢(317)
--------------------------	----------------------

### 仿真网络化

基于过往入侵特征分析潜在网络威胁检测仿真 .....	胡海峰,周改云,刘云霞(322)
大型户外传感网络通信码间抑制抗干扰仿真 .....	黄莉静,朱 研(326)
矿井供电系统漏电故障定位仿真研究 .....	张 信,康成功,韩 雪,季淑洁(330)
云计算恶意行为轨迹检测算法研究 .....	欧群雍,杨 杨(335)
基于流量控制的无线传感器网络生命期算法 .....	林海峰,高德民,蒋安娜(340)
云环境下数据流量异常行为网络负载均衡设计 .....	杨 杨,欧群雍(345)
基于多服务器互相验证的用户身份认证协议 .....	牛 雨(350)

### 仿真智能化

双足机器人小腿减振研究 .....	毛伟伟,周 烽,李 军,梁 青(355)
挖掘机作业过程土壤参数识别研究 .....	何清华,唐学佳,赵喻明,郑海华(361)
机器人工作空间轨迹规划仿真研究 .....	宁学涛,陈 健,石 强,潘玉田(367)
嵌入式智能加热炉在线温度控制方法研究 .....	王 磊,冯 茜(373)
遮蔽条件下光伏并网系统的全局 MPPT 控制 .....	万晓凤,胡 伟,余运俊,胡海林(378)
板球系统的直接自适应模糊滑模控制 .....	翟晨汐,李洪兴(383)
基于新型模糊补偿器的多电机同步控制研究 .....	王延博,佃松宜,向国菲(389)
关于火灾火焰图像检测算法研究 .....	段锁林,毛 丹(393)
基于空压机的风量优化控制仿真研究 .....	史丽萍,刘 懿,赵 磊(399)
载人潜水器对接目标位置姿态仿真控制研究 .....	董智惠,韩端锋,刘 峰,吴朝晖(404)
语音信号特征选择优化提取仿真研究 .....	杨立东,谷 宇,张 明(409)
Vectran 材料的抗拉性能仿真与验证 .....	廖惠东,钟利萍,刘 杰,刘星伯(413)
电力系统 DC-DC 转换器优化控制仿真研究 .....	华伟民,白 鹏,蒋 金,岳学磊(418)
运动图像序列中关键节点的跟踪优化仿真 .....	孔祥魁(423)
基于奇异值和相异度的心电身份识别方法 .....	陈甸甸,赵治栋(427)
600MW 汽包炉给水系统的模型辨识 .....	孙 明,韩 璞,张 妍,吕正鑫(433)
空间机器人目标捕获过程的碰撞冲击分析 .....	谢 冉,孔祥龙,师 鹏,赵育善(438)

### 仿真服务化

石油生产中有杆抽油机故障诊断研究 .....	仲志丹,李鹏辉,郭苗苗,王劲松(443)
掘进机液压系统故障检测方法研究与仿真 .....	王大虎,王敬冲,陈文博,史艳楠(448)
基于图像处理的空气污染程度判断模型仿真 .....	张 晗,马建红(452)
网络微信信息预测模型优化设计仿真 .....	高 飞(456)
基于信道信息的录音假冒者检测系统研究 .....	王茂蓉,周 萍,景新幸,岳倩倩(460)
大数据环境下用户隐私数据存储方法的研究 .....	马 蕾,杨洪雪,刘建平(465)
油气长输管道第三方破坏监测优化仿真研究 .....	杨建功,练章华,于 浩,林铁军(469)
基于三元回声状态网络的二氧化碳浓度预测 .....	王怡鸥,丁刚毅,蒙 军,刘天元(475)

# CONTENTS

Robot and Its Simulation .....	XU Geng - bao, ZENG Lian - zhi ( 1 )
Concept Research of Aerospace Product Digital Mock - up .....	HAN Xi, ZHAO Ying - jie, et, al ( 6 )
Review of Anti - ship Missile Guidance Technologies .....	LIU Yong, YANG Jian, et, al ( 10 )
Dynamics Simulation of Landing Impact Process for Airborne Type Self - Mechanized Gun .....	HE Jian, MA Ji - sheng, et, al ( 17 )
The Research of High Precision Synchronization Control in Laser Range - Gated Imaging .....	LU De - zhen, FAN Song - tao, et, al ( 22 )
Analysis of Dynamic Response for Concrete Wall under Blast Load .....	LI Wei - jian, ZHENG Qing ( 27 )
Design and Simulation of Radar Clutter Emulator Using Reverberation Chamber .....	TU Peng, LIANG Yu - ying, et, al ( 32 )
Cost Analysis in Extended Warranty of New Photoelectric Equipment .....	ZOU Xiao, JIA Yun - xian, et, al ( 37 )
Optimization Design and Simulation of Laser Ranging System .....	ZHANG Xiao - ming, WANG Yan - ping ( 41 )
Research on Maintain Task Scheduling of Armored Equipment Support Based on Queuing Theory .....	DU Jia - xing, CHEN Cai - sen, et, al ( 47 )
Study on Stabilization Control of Underactuated Unmanned Amphibious Platform .....	HUA Yu - long, SUN Wei, et, al ( 52 )
Study on Sensor Fault Diagnosis Simulation for Aircraft Engine Control System .....	WANG Tao, XUE Wei, et, al ( 56 )
Real Time Modeling and Simulation of Aircraft Cabin Pressure Control system .....	FU Long - fei, TIAN Guang - lai, et, al ( 61 )
High Speed Flight Vehicle Quickly and Flying Small Region Segmentation Image Simulation .....	LUO Ji - ning, ZHAN Yin - wei ( 65 )
Performance Assessment of Flight Simulator Servo System Controller .....	LIU Hui - bo, WU Hao ( 69 )
Scheme Design System of Aircraft Control System .....	LIN Han - zheng, HU Hai - xia, et, al ( 73 )
Optimization for Variable Structure Guidance Law of UCAV .....	WU Jun - chen, WANG Jie, et, al ( 78 )
Error Analysis of Aiming Parameters during Short - range Guidance for Fighter Plane .....	HUANG Wei, XU Jian - cheng, et, al ( 83 )
Parameter Identification of Electric Actuator Servo System on Aircraft .....	MA Min, ZHOU Sheng - chun, et, al ( 88 )
Optimization Design of Aircraft Anti - Skid Braking Controller .....	LIU Wen - sheng, XU Feng - rui, et, al ( 93 )
Simulation and Analysis for MPPT - Based Spacecraft Power System .....	ZHAO Min, WANG Qian, et, al ( 99 )
Drone aircraft flight data mining algorithm of fault simulation .....	ZHANG Zhi - yan, LI Jun - feng, et, al ( 103 )
Air Defence Missile Guidance Law Optimumcontrol and Its Simulation .....	XU Xing - yuan, QIAO Jun - ling, et, al ( 107 )
Control of Quadrotor UAV Based on Visual Servo .....	HAN Xiao, LIAO Yue - feng ( 111 )
Inversion Control for Unmanned Aerial Vehicle Based on Recurrent Wavelet Neural Networks .....	LIU Bin, WANG Jie, et, al ( 116 )
Optimal Control of Thermal Comfort Environment in Aircraft Cabin .....	LIN Jia - quan, LIU Yong - hui, et, al ( 122 )
Research on Propagation Properties of Near Space Vehicle Communication Signals .....	LING Yun - fei, CHEN Chang - xing, et, al ( 127 )
Image Reconstruction of SRM Cross - Section Based on Compressed Sensing .....	SONG Jia - hui ( 132 )
Speeded - up Robust Feature Matching for Video Stabilization Technology .....	XIE Zheng, CU Shao - hui ( 138 )
Study on Efficiency - Optimization Control ( EOC ) of Wind Turbine System .....	CHENG Ming - xia, ZENG Yu ( 142 )
Research on Modeling and Output Characteristic of Photovoltaic Series - parallel Array Based on Circuit Analysis .....	ZHANG Jun - hong, WEI Xue - ye, et, al ( 147 )
Research on Harmonic Current Detection Method in Transmission Process of Power System .....	YU Fa - shan, WANG Yao - dong, et, al ( 153 )
Prediction and Visual Simulation of Volcanic Gas Wellbore Failure .....	YANG Liu, GE Hong - kui, et, al ( 158 )
Power Load Prediction Based on Incremental Optimization Extreme Learning Machine .....	NING Xiao - guang, ZHU Yong - li ( 163 )
Optimal Control of Distillation Tower Bottom Temperature Based on DCS .....	LI Rui - hong, LIU Zhao - hui, et, al ( 167 )
Prediction Model design of Short - Term Load for Power System .....	TANG Jian, CONG Yang, et, al ( 171 )
Pretreatment of Short - Term Load Forecasting Based on K - Means Clustering Algorithm .....	WANG Hui - zhong, LIU Ke, et, al ( 175 )
Linear Active Disturbance Rejection Control for Coordinated System of Large Thermal Power Unit .....	CHEN Yu, ZHANG Rui - feng, et, al ( 180 )
Modeling and Simulation of Ship Thermoelectric Generation System in Waste Heat Energy .....	XU Sheng, WANG Xi - huai, et, al ( 185 )
An Improved Data - Driven Grey - Predictive PID Control for Main Steam Temperature .....	HU Wen - bin, Wu Yu - peng, et, al ( 190 )
Study on GARCH Effect in Traffic Flow Data and Prediction Model .....	WANG Qiu - ping, SHU Qin, et, al ( 194 )
Research of Navigation Control System for Unmanned Intelligent Vehicles .....	DUAN Jian - min, SHI Hui, et, al ( 198 )
Modeling Research of Optimal Path Planning in Status of Vehicle Congestion .....	WANG Run - fang, SHI Qing - tao ( 204 )
Analysis of Optimal Scheduling Model with Variable Speed and in Night Environment .....	LI Long ( 207 )
Lane - Changing Behavior Simulation Research in Traffic Merging Area .....	WANG Bai - li, YANG Xiao - fang, et, al ( 211 )
Simulation of Influence of Wall Roughness on Electromagnetic Wave Propagation Characteristics in Rectangular Tunnel .....	ZHANG Bing - li, CHENG Ling - fei, et, al ( 216 )
Design of Audio and Video Synchronization Algorithm for Asymmetric Wireless Transmission .....	MA Hong - lei, LIU Er - wu, et, al ( 221 )
Game Theory Based Power Allocation in Relay Systems .....	LI Zhou, ZHOU Wen ( 227 )
Optimal Design of High Performance CIC Filter .....	LIU Guo - wen, ZHU Wei - hua ( 234 )

Recognition of Power Amplifier and Design of Predistorter Based on PLS .....	YUAN Dong – ming, LIU Bo, et, al (239)
Temperature Compensation Optimization Strategy of Blower Based on Similarity Theory .....	WANG Hong – jun, JIA Shu – xuan, et, al (244)
Study on Hybrid Model of Arc Furnace for Electric Energy Quality Analysis .....	ZHAO Hui, LV Xin – ya, et, al (248)
Design and Optimization of Grain Pneumatic Conveyer Feeder .....	WEN Gui – lin, HE Zhi – xiang, et, al (254)
An Improved 5D Visualization Applied in LC Filter .....	WU Jia – ju, LI Chen, et, al (261)
Heat Dissipation Design of High Power Electromagnetic Heating System .....	FAN Bo, LI Ling (265)
Adaptive Level Set Evolution Model for Fast Image Segmentation .....	WANG Yan (269)
System Identification of Tubular Furnace Based on Improved Subspace Identification Method .....	CHEN Zai – ping, CHENG Yun, et, al (273)
Soft Sensor for Ball Mill Fill Level Based on MFCC and S – Isomap .....	JI Shan – shan, GUO Lei, et, al (277)
Research on Optimization Simulation of Oil – Water Separator in Sewage Treatment of Ship .....	LI Zong – ze, SHI Cheng – jun (281)
Super Obese Body Movement Characteristics under the Simulation of Image Segmentation .....	LIU Er – gang, HUANG Rong – fang (286)
Dynamic Simulation of the Fischer Tropsch Synthesis Reactor .....	LI Fu (290)
Numerical Simulation of Optimal Control for Sodium Carbonate in U – Tube Drying Flow Field .....	GUO Ren – ning, DUAN Le – le, et, al (295)
Three Dimensional Simulation Analysis and Optimization of Duckbill Gas – solid Injector .....	WANG Peng – hui, HU Yong – biao (299)
Study of Speed Control Characteristic and Simulation of Induction Motor Driven by Current – Source .....	GUO Zhen, ZHANG Jia – sheng, et, al (304)
Research on Configuration of S – Laying Pipeline .....	ZAN Ying – fei, HAN Duan – feng, et, al (308)
Quantum Behaved Particle Swarm Optimization Algorithm Merging Differential Evolution .....	ZHANG Lan, NIE Yu – feng (313)
Visual Software Design of Derrick Safety Evaluation .....	ZHANG Ying, LIAN Zhang – hua, et, al (317)
Based on Feature Analysis of Past Invasion Threat Detection Potential Network Simulation .....	HU Hai – feng, ZHOU Gai – yun, et, al (322)
Large Outdoor Sensor Network Communication Intersymbol Suppress Interference Simulation .....	HUANG Li – jing, ZHU Yan (326)
A simulation Study on Mine Power System Leakage Fault Location .....	ZHANG Xin, KANG Cheng – gong, et, al (330)
Cloud Computing Trajectory Mining Method Study of Malicious Behavior .....	OU Qun – yong, YANG Yang (335)
Maximum Lifetime Routing Based on Flow Controlling Algorithm in Wireless Sensor Networks .....	LIN Hai – feng, GAO De – min, et, al (340)
Network Load Balancing Design for Abnormal Behavior of Data Traffic in Cloud Environment .....	YANY Yang, OU Qun – yong (345)
User Authentication Protocol Based on Multi – Server Mutual Authentication .....	NIU Yu (350)
Study of Active – Passive Vibration Attenuation System for Crus of Biped Robots .....	MAO Wei – wei, ZHOU Feng, et, al (355)
Research on Soil Parameter identification of Excavator Digging .....	HE Qing – hua, TANG Xue – jia, et, al (361)
Simulation of Trajectory Planning for Robot Workspace .....	NING Xue – tao, CHEN Jian, et, al (367)
Research on online temperature control method of embedded intelligent heating furnace .....	WANG Lei, FENG Qian (373)
Global MPPT Control for Grid – Connected PV System under Partially Shaded Condition .....	WAN Xiao – feng, HU Wei, et, al (378)
Direct Adaptive Fuzzy Sliding – mode Control for Ball and Plate System .....	ZHAI Chen – xi, LI Hong – xing (383)
Research on Synchronization Control of Multi – Motor Systems Based on Novel Fuzzy Compensator .....	WANG Yan – bo, DIAN Song – yi, et, al (389)
Research on Fire Flame Image Detection Algorithm .....	DUAN Suo – lin, MAO Dan (393)
Simulation Research on Optimal Control of Air Volume Based on Air Compressor .....	SHI Li – ping, LIU Yi, et, al (399)
Simulation and Control of Human Occupied Vehicle Target Position and Gesture Docking .....	DONG Zhi – hui, HAN Duan – feng, et, al (404)
Application of Ant Colony Optimization in Speech Signal Feature Selection .....	YANG Li – dong, GU Yu, et, al (409)
Simulation and Verification of Tensile Properties of Vectran Material .....	LIAO Hui – dong, ZHONG Li – ping, et, al (413)
Simulation Study of Optimal Control for DC – DC Converter in Power System .....	HUA Wei – min, BAI Peng, et, al (418)
Key key Points in Motion Image Sequence Tracking Simulation Optimization .....	KONG Xiang – kui (423)
Identification Method of ECG Signal Based on SVD and Dissimilarity Analysis .....	CHEN Dian – dian, ZHAO Zhi – dong (427)
Model Identification of 600MW Subcritical Boiler Feedwater System .....	SUN Ming, HAN Pu, et, al (433)
Impact Analysis of Space Manipulators During Target Capture .....	XIE Ran, KONG Xiang – long, et, al (438)
Study on Rod Pumping Unit Fault Diagnosis in Oil Production .....	ZHONG Zhi – dan, LI Peng – hui, et, al (443)
Research and Simulation of Fault Detection Method for Hydraulic System of Tunneling Machine .....	WANG Da – hu, WANG Jing – chong, et, al (448)
Simulation on Judgment Model of Air Pollution Degree Based on Image Processing .....	ZHANG Han, MA Jian – hong (452)
Network WeChat Information Prediction Model Simulation Optimization Design .....	GAO Fei (456)
Research on Detection System of Recording Imposters Based on Channel Onformation .....	WANG Mao – rong, ZHOU Ping, et, al (460)
User Privacy Data Storage Method under Big Data Environment .....	MA Lei, YANG Hong – xue, et, al (465)
Simulation of Third – Party Damages to Long – Distance Oil and Gas Pipelines and Study on Damage Monitoring and Optimal .....	YANG Jian – gong, LIAN Zhang – hua, et, al (469)
The Forecasting of Carbon Dioxide Concentrations Based on Triplet Echo State Networks .....	WANG Yi – ou, DING Gang – yi, et, al (475)

# 计算机仿真

## JANUARY

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

## FEBRUARY

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29					

## MARCH

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

## APRIL

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

## MAY

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

## JUNE

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

## JULY

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

## AUGUST

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

## SEPTEMBER

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

## OCTOBER

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

## NOVEMBER

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

## DECEMBER

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

CALENDAR 2016

联系电话：010-57793698  
 地址：北京市阜成路14号  
 邮政编码：100048  
 网址：www.compusimu.com