



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



ISSN 1006-9348



9 771006 934033



万方数据

4
2014

目次

军事领域仿真

攻角对弹体侵彻复合靶体影响的数值仿真	李勇,于海龙,芮筱亭(1)
大口径防暴弹发射系统内弹道仿真研究	黄彩福,马永忠,曲龙飞,刘团结(5)
基于仿真的劣化装备瞬时可用度估计	黄傲林,李庆民,张光宇(9)
嵌入式辅助决策作战仿真系统研究	汤再江,薛青,徐豪华,闫守柱(14)
关于铝质轻量化弹壳断裂的强度仿真分析	吴志林,车浩召,蔡松,莫根林(17)
黑箱模型输出不确定性的敏感性分析	倪祥龙,康建设,王广彦,白永生(22)
复式侵彻弹前级聚能开孔侵彻效能的优化研究	袁志华,赵山伟,段梅,张醒(27)
改性双基推进剂II型裂纹扩展数值仿真研究	赵超,鞠玉涛,郑健,张君发(33)
损伤评估决策复杂性测度模型	尤志锋,石全,王广彦(37)
分布式攻防对抗仿真负载分析与平衡算法研究	熊嵩,周军,呼卫军(42)
复杂机电产品MTTR仿真验证研究	朱雅群,杨宇航(46)

航空航天领域仿真

ADS-B地面站信号覆盖分析及选址应用	焦卫东,周波,沈笑云(51)
涡轮流量计校准装置仿真研究	陈士龙,王彬(56)
深空航天器编队队形及姿态协同控制	慕昆,于海鹏(60)
北斗二号测距码发生器的设计与仿真	王尔申,陈士英,张芝贤,孙延鹏(65)
固体火箭发动机侵蚀燃烧的数值仿真	唐必顺,陈军,马虎(69)
固冲发动机燃气发生器性能分析及参数优化	喻银飞,陈雄,李宏文(73)
四旋翼无人直升机控制算法仿真比较研究	段国强,张岳军,李衍杰,朱晓蕊(78)
基于随机鲁棒优化的无人机着舰控制律及仿真	孙佳星,杨帆,连续,金辉(83)
导弹减阻杆减阻的数值仿真研究	涂伟,金东海(87)
基于A*算法的无人机四维航迹规划研究	周青,李广文(92)
带推力矢量飞艇的姿态控制系统设计	刘邦,吴梅(97)
基于NAPPGA算法的无人机低空突防航迹规划	任鹏,高晓光(102)
航空发动机机匣包容性打靶试验与仿真研究	段玥晨,章定国,陈思佳,廖连芳(106)
飞行器鲁棒性AADL测量仿真建模分析	朱洪(110)
非线性观测下的卫星导航优化方法仿真	袁辉(114)
一种新的双层卫星网络路由算法性能仿真研究	刘暉(118)

能源领域仿真

基于缓冲修正的灰色插值负荷预测建模与仿真	侯利强,杨善林,王晓佳,于志军(123)
轻水反应堆严重事故包壳氧化仿真模型评估	石兴伟,曹欣荣,赵国志(127)
含风电场机组组合问题的随机规划改进方法	方鑫,谭文(132)
基于极限学习机的短期电力负荷预测	王伟,杨辉华,刘振丙,李灵巧(137)
基于激励式仿真系统的直流机组一次调频研究	刘长良,李菲菲(142)
应用全范围仿真机的核电站仪控软件设计验证	孙远志,张洋,庞智(147)
模拟机数据集成探讨	潘竟斌,秦治国,曹小平,单业余(151)
煤矿高压输电线路短路故障高可靠性检测方法	董爱华,余琼芳(154)
外部电力网络应用系统安全评估优化模型仿真	艾解清,张若曦,崔磊(158)

交通体系与工具仿真

基于混沌算法的交通流量车辆调度过程仿真	常静,肖南峰(162)
面向新能源汽车制造商的多目标决策模型研究	卢健,陈学广(166)
电力机车粘着控制仿真研究	唐守乾,黄景春,闫小伟(170)
面向车辆装备运输的多型号平车装载方案优化	徐显亮,胡雪艳,庄维伟,吴虎胜(174)
考虑车禍干扰因子的物流车辆调度模型仿真	崔诗越(180)
车牌字符的类欧几里得距离特征提取与分析	王祥玲,王蒙军,周亚同(184)
基于城市交通场景的仿真研究	朱昶胜,杨青,王杰,冯文芳(188)
基于多层矢量网络评价指导的高效交通规划	蒋冠雄(192)
非独立车载网链路的多跳连接概率分析及仿真	陈耀华,彭凌西,古鹏(196)

信息仿真

基于数据冲突的频谱感知中吞吐量折中优化	姬国庆,戴革林,李汉军,朱洪波(201)
基于改进K-means的多门限能量检测法	徐立,廖名学,郑昌文(207)

一种双轮小车的自平衡运动控制系统	齐光景,谢 刚,柳英杰(212)
------------------------	------------------

教学仿真

基于智能视觉的考试作弊行为识别仿真	梅 毅,孙洪伟(219)
-------------------------	--------------

仿真应用研究

基于拓扑优化的微流控浓度梯度网络设计方法	刘 彤,刘永顺,吴一辉,刘震宇(223)
热力耦合作用下支撑平台的拓扑优化	李湘勤,谢 军,刘永明,刘震宇(227)
分布式镜像存储环境下的虚拟机快速部署算法	李 帅,杨 懋,李 勇(232)
有初始误差的桥式起重机位置跟踪迭代控制	栗三一,余发山,卜旭辉,岳伟超(238)
一种改进的永磁同步电机电流控制算法	于家斌,王小艺,许继平,秦晓飞(243)
KOA 运动疗法规范性的研究	陈志卿,李玉榕(247)
混合数据库中的脏数据隔离优化技术仿真	吕俊亚(252)
一种 MRI 序列去噪优化方法仿真	徐鲁辉,杨 伟(255)
基于 NSGA-II 算法的电动舵机改进自抗扰控制	张明月,杨洪波,章家保,贾宏光(259)
凸轮转子马达液压伺服系统的控制策略研究	张文俊,王旭永,徐川辉,苗中华(264)

仿真方法与算法

一种基于递推最小二乘的频域辨识的新算法	李迎博,呼卫军,周 军(269)
时间序列下超大规模数据流聚类方法研究	张翼飞,魏现辉(273)

仿真系统

复杂银行网络仿真系统的研究与设计	范 宏(277)
------------------------	----------

仿真网络化

过程控制网络中一种抗延迟通信算法仿真	张文杰(281)
几种无需测距定位算法定位性能仿真研究	邱奉美,游晓鹏,李怀忠(285)
一种基于蓝牙名的相对移动感知定位	王 田(290)
嵌入式系统威胁与风险评估过程仿真分析	赵竞雄(295)
大区农业中病虫害灾变临界的物联网监控	李建荣(299)
基于 DV-Hop 的 WSN 网络节点定位算法	李道全,刘月月,孙付龙(303)
进化计算的移动自组网服务节点部署算法研究	段淑敏,母军臣(307)
无人值守传感网络的最优通信成本仿真	曹晓龙,游子毅(310)
基于 WSN 的煤矿瓦斯爆炸预警系统模型研究	吴 杰,冯 锋,张海玲(314)
无线传感网络少量节点入侵评估模型仿真	章 治(318)
频繁小区切换下的网络通信优化方法仿真	孟广学,王德志(322)
广分布多节点的网络多媒体访问实现	陈鸿星(326)
无参照节点信任评估机制 WSN 多状态数据融合	李艳萍,姜 颖,蔡晓龙(330)
大规模嵌入式节点网络的节能优化仿真	林 楠,史苇杭,王源源(335)
移动社交网络的移动终端贡献度检测方法研究	海本斋(339)

仿真智能化

自组织模糊神经网络的内模控制研究与应用	王华秋(343)
基于非线性降维的高光谱混合像元分解算法	唐晓燕,高 昆,倪国强(347)
一种改进算法在机器人足球截球动作中的应用	王发智(352)
人工神经网络求解 TSP 问题的改进算法研究	郭中华,金 灵,郑彩英(355)
永磁同步电机的模糊无差拍算法仿真研究	杨 飏,胡 蓉,陈 鹏(359)
多目标优化在路径优化中的应用	梁 静,宋 慧,瞿博阳(364)
多个直流轮毂电机的同步性控制策略研究	罗庆生,王 磊,李欢飞,牛 锴(369)
基于小波包的机器人多目标识别与定位研究	徐亭婷,段锁林,庄 玮(374)
非线性动力系统个体的脉冲协调控制	刘 佳,过榴晓,胡满峰,徐振源(379)
基于多特征的金属断口图像疲劳条带分割	梁 欣,黎 明,冷 璐(384)
异类时延分数阶多自主系统的一致性	褚福芳,杨洪勇,刘 飞(389)
走钢丝机器人姿态动力学建模与模糊滑模控制	段 猛,贾 娇,贾英民(394)
永磁同步电动机位置环的模糊 PI 控制研究	王晓冬,汪旭东(398)
一种新的图像加密融合算法仿真研究	张 牧,濮存来(402)
文化算法框架下的改进人工鱼群算法研究	孙 福,张箭锋,闫 军,张 胤(407)
微创外科手术机器人运动学分析与研究	何志锋,朱坚民,宋成利,徐兆红(412)
基于振动信号分析的电机性能退化特征提取	王 立,于重重,施彦,张慧妍(416)
基于信息熵的电子商务用户行为分析聚类算法	唐胡鑫,钱 旭(422)
基于黎曼零曲率的织物静态造型研究	陈 瑛,吴明珠,胡新荣,王宗笠(426)

仿真虚拟化

DLO 几何建模算法及其表面绘制	刘鹏远,马 龙,张王卫(430)
基于热轧仿真平台的轧制力预报系统	向 阳,陈 黎,陈姚节(435)
远程虚拟实验图像传递中干扰信号消除仿真	葛丽萍,王晓卉,胡 颖,杨 波(440)

CONTENTS

Numerical Simulation of Angle of Attack on Body Projectile Penetrating Composite Target Effects	LI Yong, YU Hai - long, et, al (1)
Simulation Study on Interior Ballistic of Launching System on large caliber Anti - riot Bomb	HUANG Cai - fu, MA Yong - zhong, et, al (5)
Instantaneous Availability Evaluation of Deteriorating Equipment Based on Simulation	HUANG Ao - lin, LI Qing - min, et, al (9)
Reserch on Embedded Combat Simulation System for Assistant Decision - Making	TANG Zai - jiang, XUE Qin, et, al (14)
Simulation Analysis of Strength about Aluminum Lightweight Cartridge's Fracture	WU Zhi - lin, CHE Hao - zhao, et, al (17)
Sensitivity Analysis of Black Box Model Output Uncertainty	NI Xiang - long, KANG Jian - she, et, al (22)
Optimization Research on Precursory Shaped Charge Penetration Efficiency of Composite Penetrator Warhead	YUAN Zhi - hua, ZHAO Shan - wei, et, al (27)
Investigation with Numerical Simulation for Mode - II Crack Propagation of Modified Double - Base Propellant	ZHAO Chao, ZHENG Jian, et, al (33)
Complexity Measurement Model for Damage Assessment Decision	YOU Zhi - feng, SHI Quan, et, al (37)
Load Analysis and Balancing Solution Design for Distributed Confrontation Simulation	XIONG Song, ZHOU Jun, et, al (42)
Research on MTTR Simulation Verification of Complex Electromechanical Products	ZHU Ya - qun, YANG Yu - hang (46)
Signal Coverage Analysis and Its Application in Siting of ADS - B Ground Station	JIAO Wei - dong, ZHOU Bo, et, al (51)
Simulation Study on Turbine Flowmeter Calibration Device	CHEN Shi - long, WANG Bin (56)
Formation and Attitude Consensus Control for Spacecraft in Deep Space	MU Kun, YU Hai - peng (60)
Simulation and Design of Compass II Ranging Code Generator	WANG Er - shen, CHEN Shi - ying, et, al (65)
Numerical Simulation Process of Erosive Burning in a Solid Rocket Motor	TANG Bi - shun, CHEN Jun, et, al (69)
Performance Analysis and Parameter Optimization of Gas - generator on Ducted Rocket	YU Yin - fei, CHEN Xiong, et, al (73)
Comparative Study on Simulation of Four - rotor Unmanned Helicopter Control Algorithm	DUAN Guo - qiang, Zhang Yue - jun, et, al (78)
Autonomy Carrier Landing Control System Design and Simulation Based on Stochastic Robust Optimization	SUN Jia - xing, YANG Fan, et, al (83)
Numerical Simulation Study on Missile Antidrag Spike Drag Reduction	TU Wei, JIN Dong - hai (87)
Study on 4D Route Planning for UAV Based on A * Algorithm	ZHOU Qing, LI Guang - wen (92)
Design of Control System for the Attitude of Airship with Thrust Vector	LIU Bang, WU Mei (97)
Flight Path Planning for UAV Low - Altitude Penetration Based on Niche Adaptive Pseudo Parallel Genetic Algorithm	REN Peng, GAO Xiao - guang (102)
Targeting Experiment and Simulation Research on Casing Containment of Aero - Engine	DUAN Yue - chen, ZHANG Ding - guo, et, al (106)
Vehicle Robustness AADL Measurement Simulation Modeling Analysis	ZHU Hong (110)
Simulation of Optimization Method in Satellite Navigation under Nonlinear Observation	YUAN Hui (114)
Research on Performance Simulation of Novel Routing Algorithm for Double - Layered Satellite Networks	LIU Wei (118)
Mid - term Load Forecasting and Simulation Based on Buffer Operator and Modified Grey Model	HOU Li - qiang, YANG Shan - lin, et, al (123)
Assessment of Cladding Oxidation Simulation Model under Severe Accidents in Light Water Reactor	SHI Xing - wei, CAO Xin - rong, et, al (127)
Unit Commitment with Wind Farms via Modified Chance Constrained Programming	FANG Xin, TAN Wen (132)
Short - Term Power Load Forecasting Based on Extreme Learning Machine	WANG Wei, YANG Hui - hua, et, al (137)
Research on Once - Through Generating Unit Primary Frequency Regulation Based on Stimulative Simulation System	LIU Chang - liang, LI Fei - fei (142)
A Validation and Verification Method of I&C Software of Nuclear Power Station Based on FSS	SUN Yuan - zhi, ZHANG Yang, et, al (147)
Discussion for Data Integration of Simulator	PAN Jing - bin, QIN Zhi - guo, et, al (151)
High Reliability Detection Method of Short Circuit Fault for Coal Mine HV Transmission Line	DONG Ai - hua, YU Qiong - fang (154)
External Power Network Optimization Model for Simulation Application System Security Assessment	AI Jie - qing, ZHANG Ruo - xi, et, al (158)
Simulation of Traffic Flow Vehicle Scheduling Process Based on Chaos Algorithm	CHANG Jing, XIAO Nan - feng (162)
Research on Multi - Objective Decision Model for New - Energy - Vehicle Manufacturer	LU Jian, CHEN Xue - guang (166)
Electric Locomotive Adhesion Control Research of Simulation	TANG Shou - qian, HUANG Jing - chun, et, al (170)
Multiple - type Flatcars Loading Plan Optimization for Vehicle Equipment Transportation	XU Xian - liang, HU Xue - yan, et, al (174)
Simulation of Logistics Vehicle Scheduling Model Considering Traffic Accident Interference Factors	CUI Shi - yue (180)
Feature Extracting of License Plate Character Based on Euclidean - Like Distance Transform	WANG Xiang - ling, WANG Meng - jun, et, al (184)
Simulation and Reaserch of VANET Node Mobility Model Based on the Urban Traffic Scene	ZHU Chang - sheng, YANG Qing, et, al (188)
High Efficient Traffic Planning Based on Guidance of Multi - Vector Network	JIANG Guan - xiong (192)
Analysis and Simulation of Multi - hop Connected Probability Based on Dependence Links for Vehicular Ad hoc Networks	CHEN Yao - hua, PENG Ling - xi, et, al (196)

Trade – off Optimization of Throughput and Spectrum Sensing Based on Data Collisions	JI Guo – qing, DAI Ge – lin, et, al (201)
Improved K – Means Based Multi – Threshold Energy Detection Method	XU Li, LIAO Ming – xue, et, al (207)
Two – Wheeled Vehicle Self – Balancing Motion Control System	QI Guang – jing, XIE Gang, et, al (212)
Recognition Simulation of Cheating on Exam Based on Intelligent Vision	MEI Yi, SUN Hong – wei (219)
Micro – Network Gradient Chip Design with the Method of Topology Optimization	LIU Tong, LIU Yong – shun, et, al (223)
Topology Optimization of Supporting Platform Structures under Thermo – Mechanical Loads	LI Xiang – qin, LIU Yong – ming, et, al (227)
Fast Virtual Machine Deployment Algorithm in Image Distribution Network	LI Shuai, YANG Mao, et, al (232)
Iterative Control of Bridge Crane Location Tracking with Initial Error	LI San – yi, YU Fa – shan, et, al (238)
An Improved Current Control Algorithm of Permanent Magnet Synchronous Motor	YU Jia – bin, WANG Xiao – yi, et, al (243)
Research on Normalization of Knee Osteoarthritis Exercise Therapy	CHEN Zhi – qing, LI Yu – rong (247)
Simulation of Optimization Technology of Dirty Data Isolation in Hybrid Database	LV Jun – ya (252)
Simulation of Optimization Method of MRI Sequence Denoising	XU Lu – hui, YANG Wei (255)
Improved ADRC Control EMA Based on NSGA – II Algorithm	ZHANG Ming – yue, YANG Hong – bo, et, al (259)
Research on Control Strategy for Hydraulic Servo System with Cam Rotor Motor	ZHANG Wen – jun, WANG Xu – yong, et, al (264)
A New Arithmetic of Frequency Identification Based on Least Squares	LI Ying – bo, HU Wei – jun, et, al (269)
Research on Method of Super – large Scale Data Flow Clustering in Time Series	ZHANG Yi – fei, WEI Xian – hui (273)
Research and Design of Simulation System for Complex Bank Networks	FAN Hong (277)
Simulation Based on Anti – Delay Communication Algorithm in Process Control Network	ZHANG Wen – jie (281)
Simulation Study on Localization Performance of Several Range – Free Localization Algorithms	QIU Feng – mei, YOU Xiao – peng, et, al (285)
A Relative Mobile Perception Localization Based on Bluetooth Names	WANG Tian (290)
Embedded System Threats and Risk Assessment Process Simulation Analysis	ZHAO Jing – xiong (295)
IoT Monitoring of Cataclysm Crisis in Regional Agricultural Plant Diseases and Insect Pests	LI Jian – rong (299)
A Localization Algorithm Based on DV – Hop for Wireless Sensor Networks	LI Dao – quan, LIU Yue – yue, et, al (303)
Evolutionary Computation of Mobile AD Hoc Network Service Node Deployment Algorithms	DUAN Shu – min, MU Jun – chen (307)
Optimal Communication Cost Simulation for Sensor Network with Unmanned Duty	CAO Xiao – long, YOU Zi – yi (310)
Research on Early – Warning System Model of Coal Mine Gas Explosion Based on WSN	WU Jie, FENG Feng, et, al (314)
Simulation of Assessment Model of Invasion of a Few Nodes in Wireless Sensor Network	ZHANG Zhi (318)
Research and Simulation of Optimization Method of Mobile Network Communication under Frequent Neighborhood Switch	MENG Guang – xue, WANG De – zhi (322)
Realization of Network Multimedia Access with Wide Distribution	CHEN Hong – xing (326)
Data Fusion of WSN in Many Situations Based on No References and Several factors Nodes Trust Evaluation Mechanism	LI Yan – ping, JIANG Ying, et, al (330)
Energy – Saving Optimization Simulation of Large – Scale Embedded Nodes Network	LIN Nan, SHI Wei – hang, et, al (335)
Research on Method for Mobile Terminal Contribution Degree Detection in Mobile Social Network	HAI Ben – zhai (339)
Research and Application of Internal Model Control Based on Self – built Fuzzy Neural Network	WANG Hua – qiu (343)
Hyperspectral Unmixing Based on Nonlinear Dimensionality Reduction	TANG Xiao – yan, GAO Kun, et, al (347)
Application of Improved Calculation Method for Robot Soccer Intercepting Ball Action	WANG Fa – zhi (352)
Study on Improved Method of Neural Network to Solve TSP	GUO Zhong – hua, JIN Ling, et, al (355)
PMSM Fuzzy and Deadbeat Algorithm Simulation Research	YANG Yang, HU Rong, et, al (359)
Application of Multi – objective Optimizer in Path Planning	LIANG Jing, SONG Hui, et, al (364)
Research on Synchronous Control Strategies about Multiple DC Wheel Motors	LUO Qing – sheng, WANG Lei, et, al (369)
Research on Robot Multi – Target Recognition and Localization Based on Wavelet Packet	XU Ting – ting, DUAN Suo – lin, et, al (374)
Impulsive Consensus of Multi – Agent Systems with Nonlinear Dynamics	LIU Jia, GUO Liu – xiao, et, al (379)
Fatigue Striation Segmentation of Metal Fracture Image Based on Multi – feature	LIANG Xin, LI Ming, et, al (384)
Consensus of Fractional – Order Multi – Agent Systems with Heterogenous Communication Delays	CHU Fu – fang, YANG Hong – yong, et, al (389)
Tightrope Walker Robot Attitude Dynamic Modeling and Fuzzy Sliding Mode Control	DUAN Meng, JIA Jiao, et, al (394)
Position Loop Control of Permanent Magnet Synchronous Motor Using Fuzzy PI Method	WANG Xiao – dong, WANG Xu – dong (398)
Simulation Research on Novel Image Encryption Merging Algorithm	ZHANG Mu, PU Cun – lai (402)
Research on Modified Artificial Fish Swarm Algorithm under Frame of Cultural Algorithm	SUN Fu, ZHANG Jian – feng, et, al (407)
Kinematics Analysis of Minimally Invasive Surgery Robot	HE Zhi – feng, ZHU Jian – min, et, al (412)
Degradation Characteristics Extraction of Electric Motor Properties Based on Vibration Signal Analysis	WANG Li, YU Chong – chong, et, al (416)
Clustering Algorithm of Analysis of E – Commerce Website User’s Behavior Based on Information Entropy	TANG Hu – xin, QIAN Xu (422)
Study on Static Cloth Model Based on Riemannian Zero Curvatureh	CHEN Ying, WU Ming – zhu, et, al (426)
Geometrical Modeling Algorithm of DLO Based on B – Spline and Surface Rendering	LIU Peng – yuan, MA Long, et, al (430)
Rolling Force Prediction System Based on Hot Rolling Simulation Platform	XIANG Yang, CHEN Li, et, al (435)
Remote Interference Signal Elimination Method Research on Virtual Experiment and Simulation	GE Li – ping, WANG Xiao – hui, et, al (440)



中国科技核心期刊

(中国科技论文统计源期刊)

收录证书

CERTIFICATE OF SOURCE JOURNAL

FOR CHINESE SCIENTIFIC AND TECHNICAL PAPERS AND CITATIONS

计算机仿真

经过多项学术指标综合评定及同行专家
评议推荐, 贵刊被收录为“中国科技核心期
刊”(中国科技论文统计源期刊)。

特颁发此证书。

中国科学技术信息研究所

Institute of Scientific and Technical Information of China

北京复兴路 15 号 100038

www.istic.ac.cn

2013 年 9 月

证书编号: S049-2013

有效期至: 2014 年 12 月