

# 目 次

## 军事领域仿真

基于均匀圆阵的 LFM 信号 DOA 估计	田贤峰,陈晓明(1)
基于主瓣杂波补偿的多约束直接数据域方法	邓丽珍,常建平(4)
基于随机加权法的小子样数据评估研究	张鑫鹏,黄勇,阎杰(9)
多群协同 PSO 优化算法的 WTA 问题求解	肖嵘,赵成旺,王护利,檀朝彬(12)
基于传感信息的合成孔径雷达图像仿真系统	周兴平,姜国卫,李广,吴冲(15)

## 航空航天领域仿真

某 TMA 遥感器桁架支撑结构动态特性研究	李延伟,远国勤,耿麒先,王富国(20)
基于仿真数据的航迹规划威胁建模方法研究	刘娟,王维平(24)
基于改进 A* 算法的无人机航迹规划	蒙波,皮亦鸣,曹宗杰(29)
旋转发动机燃烧室头部气-固两相流场结构分析	冯喜平,赵胜海,李进贤,唐金兰(33)
卫星制导炸弹参数空间法控制器设计	樊方星,祝小平(37)
一种热气防冰系统的数值仿真	卜雪琴,郁嘉,林贵平(40)
平流层飞艇外形的设计优化	王全保,陈吉安,段登平,付功义(44)
基于桌面网格技术的复杂仿真系统研究	张灏龙,赵雯,冷传航,廖馨(48)
串行干扰消除法捕获性能分析	刘亚欢,田宇,李国通(52)
卫星表面光学反射特性建模与仿真研究	张翼,郑昌文,吴佳泽(57)
一种高灵敏度辅助定位解算的方法	郝占炯,田宇,李国通(62)
通过姿态控制改变卫星面质比的优化算法研究	赵晓峰,赵黎平,钟红恩,祝文博(66)
航天器 GN&C 系统功能行为建模与仿真平台研究	黄涣,杨乐平,朱彦伟(70)
先进空空导弹最优中制导律研究	祁鹏,杨军,常亮,樊垚(75)
平流层卫星轨道控制建模与仿真研究	张绪斌,赵晓蓓,符文星(79)
基于 TOPSIS 理论的导弹武器系统性能评估	陈军,张会生,张继光(83)
基于 ANSYS/CFX 耦合的机翼颤振分析	卢学成,叶正寅,张陈安(88)
地球大气光学偏振模式研究	黄河,周军,刘莹莹(92)
大包络飞行 BTI 导弹多模鲁棒控制方法研究	孙琦,周军,呼卫军(97)
优化蚁群算法在无人机航路规划中的应用	邱小湖,邱永成(102)

## 建模与验模

数据仓库 ETL 元模型设计	宋旭东,闫晓岚,刘晓冰,杨莉国(106)
----------------	----------------------

## 网络与互连技术

基于 HSTCP 协议的 PI 算法稳定性分析	谢景伟(109)
自适应拥塞控制算法的研究与仿真	周朋,惠晓威(112)
移动自组网多安全等级路由策略的分析与仿真	陈雁,安建平(116)
IBC 模型在 Web 安全体系中的应用研究	葛维进,胡晓惠,邓勇(120)
一种改进无线传感器网络定位算法的研究	孙泽宇,魏巍(125)
基于分簇的无线传感器网络密钥预分配方案	邓宏贵,施佳佳(128)
一种新的 P2P 网络资源定位模型仿真研究	徐坚(132)
一种改进的无线传感器网络分簇路由算法	宋开旭(136)
无线传感器网络的 LEACH 算法改进与仿真研究	顾明霞(139)
一种上行 MIMO-OFDM 资源分配改进算法	李宁(142)
无线传感网络覆盖算法及仿真研究	顾钧(146)
粒子群优化的无线传感器网络仿真研究	苏炳均,李林(150)

## 人工智能与专家系统

BP 神经网络 PID 控制在吹塑机系统中的应用	王安,李晓娟(153)
基于一种混沌 BP 算法的神经模糊控制器的优化	戚志东(157)
二次规划问题的神经网络方法及其数值仿真	刘自鑫,钟守铭,吕恕,叶茂(161)
基于参数辨识的自适应时滞混沌系统同步	赖宏慧,黄颖(165)
自适应遗传算法和 RBF 网络在传球中的应用	廖本先,杨宜民,张学习,项凡(169)

基于 Lie 理论对两轮不稳定小车的变结构控制	朱加辉,屈胜利,李炎昭,孙建勤(173)
基于 PSO 的可能性 C 均值聚类算法的研究	高颖,王修亮,陆旭青,殷允锋(177)
装备故障诊断方法研究	崔学忠,李冬,桑亮,李馥彤(181)
基于支持向量机的移动机器人环境识别	丁刚,王海波,王智灵,陈宗海(186)
基于嵌入系统的机器人视觉跟踪算法优化研究	胡金明(191)
多个地面移动机器人建立构型空间	焦立男,杨小军,孙朝云,沙爱民(195)
基于 BP 神经网络改进的黄金价格预测	曾濂,马丹頔,刘宗鑫(200)
面向大数据的 SVM 参数寻优方法	龚永罡,汤世平(204)
支持向量机与 K 近邻结合的网页分类方法	宗永升,张祎(208)
<b>优化仿真</b>	
基于非线性规划的微粒群算法研究	何志华(212)
一种速度不完全更新混沌粒子群优化算法	庞淑萍(215)
基于二维正交小波滤波器设计方法	马伯华,郭滨钊,张海成(220)
<b>可视化仿真技术</b>	
基于 Curvelet 变换的地震噪声衰减	林春,王绪本,刘四兵(224)
大地形空间格网点平均曲率算法研究及可视化	刘世彬,刘兴彦(227)
光电跟踪中实时视频对象分割算法	李银伢,陈黎,戚国庆,盛安冬(230)
飞行模拟器极限位姿的可视化仿真分析	马建明,何景峰,熊海国,韩俊伟(235)
基于视觉注意力模型的医学图像目标检测	廖璠,孙季丰(239)
老年人异常行走步态特征提取	孔令富,侯亚辉,李海涛(242)
汉字联机手写识别系统的设计与实现	胡石根,陆以勤(245)
一种基于数学形态学的 CT 图像脑瘤分割方法	苏雪平,齐敏,赵海涛,严欣(249)
基于加权主动形状模型人脸定位研究	谢玉鹏,孙桂芝(253)
基于二维最大熵阈值分割的钙化点检测算法	许立腾,徐向民(255)
基于高斯混合模型的背景建模球员检测算法	阎刚,崔国栋,于明(258)
幼儿漏斗胸三维可视化建模方法研究	王文东,史仪凯,尹丽娜,杨硕(263)
智能监控系统跟踪技术研究	何继淳,叶晓丽,申安来(267)
基于工作流的图像检索系统研究	卢珊(271)
基于密度自适应粒子群优化的图像可用度分类	吴兴华,郑红(274)
<b>虚拟仿真</b>	
一种基于环境变化的树木动态生长仿真模型	刘东平,张文俊,田超,蔡方方(278)
虚拟维修系统交互控制方法研究	李海军,刘霄,何铁宁(281)
<b>能源领域仿真</b>	
在线拉曼光谱仪测定石油产品馏程的仿真算法	阎宇,程明霄,赵天琦,王京港(286)
<b>交通体系与工具仿真</b>	
磁流变减振器磁路结构的优化	邓晓毅,石明全,范树迁(291)
基于神经网络和 D-S 证据理论的交通目标识别	刘晓敏,杨昕欣(295)
BP 神经网络在车牌字符识别中的应用研究	郭荣艳,胡雪惠(299)
<b>社会科学领域仿真</b>	
基于支持向量机的股票价格预测研究	杨新斌,黄晓娟(302)
基于贝叶斯分类器的报税欺诈检测	张克涵,吴迪,李爱国,宋保维(306)
<b>仿真体系结构与仿真软件平台</b>	
基于 Eclat 算法的图书推荐系统仿真	陈康(311)
<b>仿真教学/训练与仿真器</b>	
基于云计算的三维虚拟学习环境的设计与应用	俞华锋(315)
基于改进遗传算法的自动组卷问题研究	周艳丽(319)
<b>仿真应用研究</b>	
PCB 传输线间串扰抑制方法分析	杜廷辉,丁君,郭陈江(323)
一种改进的 SVPWM 算法研究	刘嫣(328)
Multisim 在漏电开关保护技术设计中的应用	刘刚,高平,邹剑(333)
基于频谱方差的抗噪声语音端点检测算法	刘玉珍,连自锋(337)
压气机性能衰退和清洗恢复仿真研究	李冬,李本威,杨欣毅,邓斌(341)
跳频序列族构造技术研究	陈川,高伟,陈楚君,刘燕(346)
改进卡尔曼滤波的目标跟踪研究	杨柳(351)
小波分析在输油管道泄漏检测与定位中的应用	苏维均,周莺,于重重(356)

# CONTENTS

DOA Estimation of LFM Signals Based on UCA .....	TIAN Xian - feng, CHEN Xiao - ming ( 1 )
Scheme Based on Mainlobe Clutter Compensation of Multiple Constrains Direct Data Domain .....	DENG Li - zhen, CHANG Jian - ping ( 4 )
Study of Small Sample Test Data Estimation Base on Bayes Bootstrap Method .....	ZHANG Xin - peng, HUANG Yong, YAN Jie ( 9 )
Multi Swarms Cooperative Particle Swarm Optimization for Solving WTA Problem .....	XIAO Rong, ZHAO Cheng - wang, WANG Hu - li, TAN Chao - bin ( 12 )
Emulational System of SAR Image Based on Sensor Information .....	ZHOU Xing - ping, JIANG Guo - wei, LI Guang, WU Chong ( 15 )
Study on Dynamic Characteristics of Truss Support Structure in a TMA Space Remote Sensor .....	LI Yan - wei, YUAN Guo - qin, GENG Qi - xian, WANG Fu - guo ( 20 )
A Simulation Data Based Space Threat Modeling Method for Path Planning .....	LIU Juan, WANG Wei - ping ( 24 )
Path Planning Algorithm Unmanned Aerial Vehicle Based On Improved A * Algorithm .....	MENG Bo, PI Yi - ming, CAO Zong - jie ( 29 )
Structural Analysis on the Gas - Solid Two - Phase Flow Field in the Headof a Spinning Motor Combustion Chamber .....	FENG Xi - ping, ZHAO Sheng - hai, LI Jin - xian, TANG Jin - lan ( 33 )
Design of Parameter Space Method Controller for Satellite Guidable Bomb .....	FAN Fang - xing, ZHU Xiao - ping ( 37 )
Numerical Simulation of an Airfoil Hot - air Anti - icing System .....	BU Xue - qin, YU Jia, LIN Gui - ping ( 40 )
Shape Optimization of Stratosphere Airship .....	WANG Quan - bao, CHEN Ji - an, DUAN Deng - ping, FU Gong - yi ( 44 )
Research on Complex Simulation System based on Desktop Grid Technology .....	ZHANG Hao - long, ZHAO Wen, LENG Chuan - hang, LIAO Xin ( 48 )
Capture Performance Analysis of Successive Interference Cancellation .....	LIU Ya - huan, TIAN Yu, LI Guo - tong ( 52 )
Research on Modeling and Simulation of Satellites' Surface Optical Reflection Characteristics .....	ZHANG Yi, ZHENG Chang - wen, WU Jia - ze ( 57 )
An Algorithm Measure of High Sensitivity Assistant Positioning .....	HAO Zhan - jiong, TIAN Yu, LI Guo - tong ( 62 )
Adjusting Area - Mass - Ratio of Satellite Formation Flying Through Attitude Control with Considering the Orientation of Solar Panel .....	ZHAO Xiao - feng, ZHAO Li - ping, ZHONG Hong - en, ZHU Wen - bo ( 66 )
Research on Function - Behavior Modeling and Simulation Platform of Spacecraft GN&C System .....	HUANG Huan, YANG Le - ping, ZHU Yan - wei ( 70 )
Optimal Mid - Course Guidance Research for Advanced Air - Air Missile .....	QI Peng, YANG Jun, CHANG Liang, FAN Yao ( 75 )
Research of Stratospheric Satellite Orbit Control Modeling and Simulating .....	ZHANG Xu - bin, ZHAO Xiao - bei, FU Wen - xing ( 79 )
Performance Evaluation of Missile Weapon Systems Based on Advanced TOPSIS Theory .....	CHEN Jun, ZHANG Hui - sheng, ZHANG Ji - guang ( 83 )
A Coupled ANSYS/CFX Method For The AGARD 445.6 Wing Flutter Calculation .....	LU Xue - cheng, YE Zheng - yin, ZHANG Chen - an ( 88 )
Atmosphere Optical Polarization Pattern Research of Earth Surface .....	HUANG He, ZHOU Jun, LIU Ying - ying ( 92 )
Big Envelope Flight BTT Missiles Control System Design Based on multiple model H $\infty$ Robust Control Theory .....	SUN Qi, ZHOU Jun, HU Wei - jun ( 97 )
Application of Ant Algorithm to Path Planning of Unmanned Aerial Vehicle .....	QIU Xiao - hu, QIU Yong - cheng ( 102 )
Design ETL Meta - model In Data Warehouses .....	SONG Xu - dong, YAN Xiao - lan, LIU Xiao - bing, YANG Li - guo ( 106 )
The Stability Analysis of PI Algorithm Based On HSTCP Protocol .....	XIE Jing - wei ( 109 )
Research and Simulation of adaptive congestion control algorithm .....	ZHOU Peng, HUI Xiao - wei ( 112 )
Analysis and Simulation on Multi - Level Security Mobile Ad Hoc Network Routing Strategy .....	CHEN Yan, AN Jian - ping ( 116 )
Research of IBC Model and Application in Web - Security System .....	GE Wei - jin, HU Xiao - hui, DENG Yong ( 120 )
Research on Algorithm of Coverage Control in Wireless Sensor Network .....	SUN Ze - yu, WEI Wei ( 125 )
An Improved Key Pre - distribution Method Based on Clusters for WSN .....	DENG Hong - gui, SHI Jia - jia ( 128 )
Simulation Research of a New P2P Resources Location Model .....	XU Jian ( 132 )
An Improved Cluster Routing Algoirthm For Wireless Sensor Network .....	SONG Kai - xu ( 136 )
Provement and Simulation Research of Wireless Sensor Network LEACH Protocol .....	GU Ming - xia ( 139 )
Improve of Resource Allocation Algorithm of Uplink MIMO - OFDM System .....	LI Ning ( 142 )
Research on of Wireless Sensor Networks Coverage Simulation .....	GU Jun ( 146 )
Simulation Research of Wireless Sensor Netwoe Based on Particle Swarm Optimization .....	SU Bing - jun, LI Lin ( 150 )
Application of BP Neural Networks PID Control in Blow Molding Machine System .....	WANG An, LI Xiao - juan ( 153 )
Optimization of Neural - fuzzy Controller Based on A Chaos BP Hybrid Algorithm .....	QI Zhi - dong ( 157 )
Neural Network Method for Quadratic Optimization Problem and Its Numerical Simulation .....	LIU Zi - xin, ZHONG Shou - ming, Lv Shu, MAO Ye ( 161 )
Adaptive Synchronization of Time - delay Chaotic Systems Based on Parameter Identification .....	LAI Hong - hui, HUANG Ying ( 165 )
Application of Adaptive Genetic Algorithm and RBF Network in Passing Ball .....	LIAO Ben - xian, YANG Yi - min, ZHANG Xue - xi, XIANG Fan ( 169 )
VSC Of Two - Wheel Unstable Vehicle Based On Lie - Theory	

Possibilistic C - Means Clustering Algorithm Based on Particle Swarm Optimization	ZHU Jia - hui, QU Sheng - li, LI Yan - zhao, SUN Jian - qin (173)
..... CAO Ying, WANG Xiu - liang, LU Xu - qing, YIN Yun - feng (177)	
Research on the Equipment Fault Diagnosis Method	CUI Xue - zhong, LI Dong, SANG Liang, LI Fu - tong (181)
Environment Identification Based on Support Vector Machine for Mobile Robot	DING Gang , WANG Hai - bo , WANG Zhi - ling , CHEN Zong - hai (186)
Research on Robot Vision Tracing Algorithm Optimization Based on Embedded System	HU Jin - ming (191)
Generation of Configuration Space Using Multiple Ground Mobile Robots	JIAO Li - nan , YANG Xiao - jun, SUN Zhao - yun, SHA Ai - min (195)
Gold Price Forecast Based on Improved BP Neural Network	ZENG Lian,MA Dan - di ,LIU Zong - xin (200)
A Novel Parameters Optimization of SVM for Large Data Sets	GONG Yong - gang, TANG Shi - ping (204)
Web Classification Method Based on Support Vector Machines and KNN	ZONG Yong - sheng,ZHANG Yi (208)
A Search about Particle Swarm Optimization in Solving Nonliner Programming Problem	HE Zhi - hua (212)
A Chaotic Particle Swarm Optimization with Incomplete Updating Velocity	PANG Shu - ping (215)
A Convex Optimization Based Method to Design Two Dimensional Orthogonal Wavelet Filter Banks	MA Bo - hua,GUO Bin - hao,ZHANG Hai - cheng (220)
Curvelet - based Seismic Data Denoise	LIN Chun,WANG Xu - ben,LIU Si - bing (224)
Research and Visualization for the Average Curvature Operator of 3 - D Mesh Point	LIU Shi - bin, LIU Xing - yan (227)
An Algorithm of Video Object Segmentation in Real - Time in Electric - Optic Tracking	LI Yin - ya, CHEN Li, QI Guo - qing, SHENG An - dong (230)
Visual Simulation Analysis of Extreme Pose of Flight Simulator	MA Jian - ming,HE Jing - feng,XIONG Hai - guo,HAN Jun - wei (235)
Target Detection of Medical Image Based on Human Visual Attention Model	LIAO Fan,SUN Ji - feng (239)
Elderly Abnormal Walking Gait Feature Extraction	KONG Ling - fu, HOU Ya - hui, LI Hai - tao (242)
Design and Implementation of On - line Handwritten Chinese Character Recognition System	HU Shi - gen,LU Yi - qin (245)
A Method for Segmenting Brain Tumors in CT Images Based on Mathematical Morphology	SU Xue - ping,QI Min,ZHAO Hai - tao,YAN Xin (249)
Research of Location of Human Face Based on Weighted ASM	XIE Yu - peng,SUN Gui - zhi (253)
A Calcification Detection Method Based on Two - Dimensional Entropic Thresholding	XU Li - teng,XU Xiang - min (255)
Player Detection Algorithm Based on Gaussian Mixture Models Background Modeling	YAN Gang, CUI Guo - dong, YU Ming (258)
Research on Biomechanical and Visualized Modeling of Pectus Excavatum in Children	WANG Wen - dong,SHI Yi - kai, YIN Li - na, YANG Shuo (263)
The Study on Tracking of Intelligent Surveillance Systems	HE Ji - chun, YE Xiao - li, SHEN An - lai (267)
Research on Image Retrieval Techniques Based on Workflow	LU Shan (271)
Research on Availability of Satellite Images Based on Density Adaptive Particle Swarm Optimization	WU Xing - hua,ZHENG Hong (274)
A Dynamic Growth Simulation Model of Trees Based on Environmental Changes	LIU Dong - ping, ZHANG Wen - jun,TIAN Chao,TSAI Fang - fang (278)
Research on Methods of Interactive Control in System of Virtual Maintains	LI Hai - jun, LIU Xiao, HE Tie - ning (281)
Simulation Approach for On - line Raman Spectrometer Determination of Distillation Range of Petroleum Products	YAN Yu,CHENG Ming - xiao,ZHAO Tian - qi,WANG Jing - gang (286)
Magnetic Circuit Optimization for Magnetorheological Fluid Absorber	DENG Xiao - yi, ,SHI Ming - quan, ,FAN Shu - qian (291)
Traffic Target Recognition in Traffic Surveillance System Based on Neural Network and D - S Evidence Theory	LIU Xiao - min, YANG Xin - xin (295)
Study about License Plate Recognition Based on Back Propagation Neural Network	GUO Rong - yan, HU Xue - hui (299)
Study about Application of Stock Price Forecasting Based on Support Vector Machine	YANG Xin - bin, HUANG Xiao - juan (302)
Fraud Detection in Tax Declaration Based on Bayesian Classifier	ZHANG Ke - han,WU Di,LI Ai - guo,SONG Bao - wei (306)
Simulation of Book Recommender System Based on Eclat Algorithm	CHEN Kang (311)
Design and Application of Virtual 3D Study Environment Based On Cloud Computing	YU Hua - feng (315)
Design on Intelligent Auto - generating Examination Paper based on Genetic Algorithm	ZHOU Yan - li (319)
Analysis of Crosstalk Reduction in Transmission Lines on PCBs	DU Ting - hui,DING Jun,GUO Chen - jiang (323)
Study on Improved SVPWM Algorithm	LIU Yan (328)
Application of Multisim in Design of Leakage Switch Protection Technology	LIU Gang , GAO Ping,ZOU Jiang (333)
Algorithm of Anti - noise Endpoint Detection Based on Spectrum Variance	LIU Yu - zhen,LIAN Zi - feng (337)
Simulative Research on Compressor Performance Declination and Restoration by Cleaning	LI Dong, LI Ben - wei, YANG Xin - yi, Deng Bin (341)
Performance Analysis of Families of Frequency - hopping Sequences Based on M - sequences and RS Codes	CHEN Chuan,GAO Wei,CHEN Chu - jun,LIU Yan (346)
Study on Target Tracking Based on Improved Unscented Transform Kalman Filtering	YANG Liu (351)
Application of Wavelet Analysis in Leakage Detection and Location of Oil Pipeline	SU Wei - jun, ZHOU Ying, YU Chong - chong (356)