

# TABLE OF CONTENTS

## 目 录

### 邻域搜索和改进莱维因子的人工蜂鸟优化算法

#### **Neighborhood Search and Artificial Hummingbird Optimization Algorithms with Improved Lévy Factors**

何永康, 李旭芳 ..... 987

### 基于 FRFT 的 LFM 信号时延估计分析与仿真

#### **Analysis and Simulation of LFM Signal Delay Estimation Based on FRFT**

宋健, 周骅 ..... 1004

### 基于 CAE 的盖板压铸工艺设计及优化

#### **Cover Plate Die-Casting Process Design and Optimization Based on CAE**

刘军, 沈玉康, 刘洋, 高凯 ..... 1017

### 基于无传感器反馈的潜血式医用高速微电机驱动控制系统研究

#### **Research on Drive Control System for Occult Blood Medical High-Speed Micromotor Based on Sensorless Feedback**

韩金旭, 耿晓斌, 张天逸, 程云章 ..... 1024

### 基于 OpenCL 的车道线检测算法加速

#### **Acceleration of Lane Detection Algorithm Based on OpenCL**

葛品仕, 刘甜甜 ..... 1039

### 考虑所有制类型的企业创新效率影响因素研究

#### **Research on Influencing Factors of Enterprise Innovation Efficiency Considering Ownership Difference**

贾晓霞, 丁寒, 黄可, 王博瑶 ..... 1050

### 基于 SolidWorks 二次开发的混合机传动轴及螺带参数化设计

#### **Parametric Design of Mixer Screw Belt Based on the Secondary Development of SolidWorks**

张经纬, 沈景凤, 仲梁维 ..... 1069

### 基于流固耦合的柔性阴道扩张装置设计与优化

#### **Design and Optimization of Flexible Vaginal Expansion Device Based on Fluid-Solid Coupling**

张轩, 邹任玲, 姜立文, 李子浩, 罗依萍, 林芊瑶, 李丹, 管睿, 尹学志 ..... 1078

### 装配式矮 T 梁 UHPC 湿接缝构造力学性能研究

#### **Study on the Mechanical Properties of UHPC Wet Joints of Prefabricated Low T Beam**

朱子琪, 王炎, 陈浙江, 曹林龙, 田大丰 ..... 1090

**中型货运汽车车架结构静力学及模态的有限元分析****Finite Element Analysis of Static and Modal Analysis of the Frame Structure of Medium-Sized Freight Vehicles**

盛小丽, 万宇璇 ..... 1100

**球阀仿真领域研究进展****Research Progress in the Field of Ball Valve Simulation**

丁朱波, 王斌, 陈青, 顾金彤, 陈豪, 季如鹏 ..... 1110

**视交叉上核神经元递质释放与弛豫速率的异质关系对导引的影响研究****Research on the Impact of Heterogeneous Relationship between Neurotransmitter Release and Relaxation Rates on the Entrainment of the SCN Neurons**

陈宣羽, 顾长贵, 席雨菲 ..... 1124

**基于双向期权的多级供应链应急物资储备研究****Multi-Level Supply Chain Emergency Reserve Based on Bidirectional Option Contract**

刘财彤, 倪静 ..... 1132

**复合轴辐式两阶段同城快递枢纽选址优化研究****Optimization of Two Stage Intra-City Express Hub Location Based on Hybrid Hub and Spoke Network**

李盈盈, 倪静 ..... 1145

**基于双模型的婴儿异常睡姿识别方法****Recognition Method for Abnormal Sleeping Posture of Infants Based on Dual Models**

黄小杰, 黄明, 瞿福星, 章顺, 巢梓涵 ..... 1164

**基于深度学习的自助 CT 识别平台****Self-Service CT Recognition Platform Based on Deep Learning**

谢志鹏, 韩心雨, 张皓然, 刘荟, 阿拉依·赛力克 ..... 1174

**多源特征增益编码的图像修复网络****Image Inpainting Networks with Multi-Source Feature Encoding**

王晓红, 徐世豪, 赵徐, 徐锟 ..... 1183

**基于人体模型——SMPL 的人体三维测量方法及应用****Human Body 3D Measurement Method and Application Based on Human Body Model—SMPL**

刘寒, 马宇萌, 古迎冬, 杨稼菡, 蔡万江, 李淑清, 郑梓璇, 刘艺 ..... 1195

**基于类感知对比学习的半监督故障诊断****Fault Diagnosis Based on Class-Aware Contrastive Semi-Supervised Learning**

金泽中, 叶春明 ..... 1203

**基于 ANSYS Workbench 的四缸发动机曲轴有限元分析****Finite Element Analysis of Four-Cylinder Engine Crankshaft Based on ANSYS Workbench**

谢佩, 任乐 ..... 1212

**基于高粘度介质对气液两相混合的数值模拟****Numerical Simulation of Gas-Liquid Two-Phase Mixing Based on High Viscosity Medium**

任恒宇, 叶立, 张凤, 时安宁, 吕文静 ..... 1223

**基于流热固多物理场耦合的电主轴热误差建模研究****Research on Thermal Error Modeling of Electric Spindle Based on Fluid Thermal Solid Multiphysics Coupling**

孙玉山, 陈光胜, 王豪硕 ..... 1236

**基于模糊推理决策神经网络前馈补偿值的直流伺服电机位置跃变控制****Position Leap Control of DC Servo Motor Based on Neural Network Feedforward Compensation Quantity Decided by Fuzzy Inference**

颜煜庭, 朱亦丹, 黄之文, 朱坚民 ..... 1247

**基于 LSTM 模型的草原土壤状态预测****Grassland Soil Condition Prediction Based on LSTM Model**

吕园园, 赵大胜, 金志尧 ..... 1265

**随机振动条件下的电池架的响应分析****Response Analysis of the Battery Box Bottom under Random Vibration Conditions**

陈高帅 ..... 1279

**基于 ABAQUS 的端子钣金件有限元分析与结构优化****Finite Element Analysis and Structural Optimization of Terminal Sheet Metal Parts Based on ABAQUS**

薛浩, 王艳 ..... 1288

**基于 BP 神经网络的自适应模糊半参数时间序列模型****Adaptive Fuzzy Semiparametric Time Series Model Based on BP Neural Network**

聂景春, 陆秋君 ..... 1295

**基于神经网络的卧螺离心机螺旋流场流速建模****Neural Network-Based Modeling of Flow Velocity in the Spiral Flow Field of a Decanter Centrifuge**

赵日炜, 丛佩超, 周栋, 李文彬 ..... 1304

**一种大型创新类比赛评审方案的研究****A Study on the Evaluation Scheme of a Large-Scale Innovation Competition**

赵大胜, 吕园园, 金志尧 ..... 1311

**基于自注意力机制改进 GCNN 模型的图书标签分类研究****Research on Book Label Classification Based on Improved GCNN Model Based on Self-Attention Mechanism**

张健 ..... 1322

**基于二维卷积神经网络的轴承故障智能诊断****Intelligent Diagnosis of Bearing Faults Based on Two-Dimensional Convolutional Neural Network**

海天恒 ..... 1333

**基于 ANSYAS 的深沟球轴承有限元分析**

**Finite Element Analysis of Deep Groove Ball Bearings Based on ANSYAS**

李庆 ..... 1346

**基于 ABAQUS 有限元的板料折弯分析**

**Sheet Bending Analysis Based on ABAQUS Finite Element**

刘岗岗, 胡旭东, 彭来湖 ..... 1353

**基于 CFD 的非道路车辆尾气后处理器性能研究**

**Research on the Performance of Off-Road Vehicle Exhaust Processor Based on CFD**

殷雷, 陈玄 ..... 1364

**基于改进神经网络的肺炎图像分类研究**

**Research on Pneumonia Image Classification Based on Improved Neural Network**

曾德洋, 杨鑫荣 ..... 1374

**儿童颈椎 C2~C7 节段生物力学特性的有限元研究**

**Finite Element Study on Biomechanical Characteristics of C2~C7 Segments of Cervical Spine in Children**

张翠述, 赵改平, 马童 ..... 1381

**不同特征的家庭保险支出影响居民消费的研究**

**A Study on the Impact of Household Insurance Expenditure with Different Characteristics on Resident Consumption**

万凡 ..... 1391

**基于超声波技术和随机森林模型的电池浸润程度分析**

**Analysis of Battery Wetting Degree Based on Ultrasonic Technology and Random Forest Model**

王一宇, 来鑫 ..... 1404

**基于 ANSYS Workbench 的农用浅耕旋耕刀有限元分析**

**Finite Element Analysis of Shallow Rotary Tillage Knives in Agriculture Based on ANSYS Workbench**

何长峰 ..... 1414

**MEMS 半填充微型气相色谱柱微流道设计及流场研究**

**Microfluidic Channel Design and Flow Field Study of MEMS Semi-Packed Micro Gas Chromatography Columns**

陈宗帅, 胡州 ..... 1424

**基于改进 UNet++模型的染色体图像分割研究**

**Research on Chromosome Image Segmentation Based on Improved UNet++ Model**

马秋怡, 张学典 ..... 1434

**气囊抛光机器人振动特性对加工质量影响研究**

**Study on the Influence of Vibration Characteristics of Bonnet Polishing Robot on Processing Quality**

周勇宇, 焦培俊 ..... 1444

**一种阶段重置的知识蒸馏方法研究与仿真****Design and Simulation of Stage Reset Knowledge Distillation Method**

陈骏立, 孙占全 ..... 1455

**基于数值模拟的单晶硅切削加工表面质量研究****Study on Surface Quality of Machined Single Crystal Silicon Based on Numerical Simulation of Cutting Process**

张士军, 王海杰 ..... 1466

**基于 ABAQUS 的十字轴式万向联轴器有限元分析****Finite Element Analysis of Cross Shaft Universal Coupling Based on ABAQUS**

袁崇越 ..... 1476

**基于 Workbench 的糖果包装机轴上摆臂拓扑优化设计****Topology Optimization Design of Swing Arm on the Shaft of Candy Packaging Machine Based on Workbench**

陈旭东, 李玲 ..... 1484

**六自由度并联运动平台运动分析及仿真****Motion Analysis and Simulation of a Six-Degree-of-Freedom Parallel Motion Platform**

葛智溶, 郭语 ..... 1494

**单像素成像的乘法关联调控仿真与实验****Simulation and Experiment of Single Pixel Imaging Based Correlated Manipulation for Multiplication**

朱宗晶 ..... 1501

**基于改进 RAO 算法的永磁同步电机 2-DOF PI 参数整定****Optimum 2-DOF PI Controller Design in PMSM Using Improved RAO Algorithm**

唐高铭, 简献忠 ..... 1511

**一种可实现快速 PCR 检测的微流控芯片设计****Design of a Microfluidic Chip for Rapid PCR Detection**

程节生, 徐浩, 徐志凯, 瑶琦 ..... 1523

**电极和组织参数对动脉粥样硬化斑块射频消融影响的仿真研究****Simulation Study on the Impact of Electrode and Tissue Parameters on Radiofrequency Ablation of Atherosclerotic Plaque**

舒爽 ..... 1534

**考虑样本不平衡的窃电检测模型****Electricity Theft Detection Model Considering Sample Imbalance**

戴宇, 张巍 ..... 1546

**基于 CATIA 二次开发的白车身焊装夹具参数化设计研究****Research on Parametric Design of Body-in-White Welding Fixture Based on CATIA Secondary Development**

胡庆, 沈景凤, 仲梁维 ..... 1556

**基于事件触发机制的电液伺服位置控制研究****Event-Triggered Control for Electrohydraulic Servo Control System**

俞龙桥 ..... 1565

**基于 Transformer 和双注意力机制的颈动脉超声造影图像斑块分割方法****Segmentation of Carotid Plaque in Contrast-Enhanced Ultrasound Image****Based on Transformer and Dual Attention Mechanism**

王金生, 孙占全 ..... 1577

**基于多智能体的高层建筑分阶段火灾疏散仿真及策略研究****Simulation and Strategy for Phased Fire Evacuation of High-Rise Building****Based on Multi-Agent**

黄梓浩, 景奕钦, 朱后壮, 徐晶, 马国丰 ..... 1592

**某汽车盘式制动器设计与热力耦合分析****Design and Thermal Coupling Analysis of a Certain Automobile Disc Brake**

李辉, 徐颖 ..... 1604

**基于自注意力卷积网络对脑卒中术后血肿预测****Prediction of Hematoma after Stroke Based on Self-Attention Convolutional Network**

于文博 ..... 1615

**基于 ABAQUS 的陶瓷颗粒增强铝基复合材料切削特性仿真分析****Simulation Analysis of Cutting Characteristics of Ceramic Particle****Reinforced Aluminum Matrix Composites Based on ABAQUS**

赵浪 ..... 1623

**基于预学习字典的对称 ADMM 在人脸去噪上的应用****Application of Symmetric ADMM Based on Pre-Learned Dictionary in Face Denoising**

张静雯, 党亚峰, 倪诗皓 ..... 1630

**出血性脑卒中患者水肿体积进展建模研究****Study on Modeling of Edema Volume Progression in Patients with Hemorrhagic Stroke**

徐颖 ..... 1641

**基于 VMD-CIGWO-BP-DTA 算法的空调负荷预测****Air Conditioning Load Forecasting Based on VMD-CIGWO-BP-DTA Algorithm**

白雪松, 王志毅, 鲁浩翔, 谭永辉, 魏同正 ..... 1651

**基于 ANSYS 的车轮轮毂动态分析****Dynamic Analysis of Wheel Hub Based on ANSYS**

左江涛 ..... 1662

**基于利尿肾图的新型肾实质自动分割算法****A Novel Automatic Renal Parenchyma Segmentation Algorithm Based****on the Diuretic Renal Image**

朱郭慧, 孙占全 ..... 1673

**Moore 喷管内湿蒸汽非平衡凝结流动数值模拟****Numerical Analysis of Non-Equilibrium Condensation Flow of Wet Steam inside Moore Nozzle**

张帅气, 周升迪, 邓明国 ..... 1684

**基于深度学习的多标签不均衡心电信号分类****Multi-Label Imbalanced ECG Signal Classification Based on Deep Learning**

顾浩丞, 孙占全 ..... 1693

**涡旋压缩机滚动轴承疲劳寿命分析及可靠性研究****Fatigue Life Analysis and Reliability Study of Rolling Bearings in Scroll Compressor**

何伟兴, 卢曦, 卢诚 ..... 1705

**涡旋压缩机排气管道进气口与扩张腔对压力脉动影响研究****Research on the Influence of the Inlet and Expansion Chamber of the Exhaust****Pipeline of a Vortex Compressor on Pressure Pulsation**

王本源, 卢曦 ..... 1717

**基于 ANSYS 的差速器壳体有限元分析****Finite Element Analysis of Differential Housing Based on ANSYS**

吴磊 ..... 1728

**城市轨道交通网络关键节点识别与抗毁性分析****Identification of Key Nodes and Invulnerability Analysis of Urban Rail Transit Network**

薛欢, 倪静 ..... 1739

**考虑时间延迟的电动汽车充电站调度策略****Scheduling Strategies for Home Energy Management Systems Considering Time Delays**

黄晨浩, 张巍 ..... 1750

**基于数据驱动场景建模的综合能源系统调度方法****Data-Driven Scenario Generation-Based Optimal Scheduling Method for Integrated Energy Systems**

申江兰, 毛业涛, 聂祥论, 王志杨, 李义 ..... 1759

**数字普惠金融对中小企业融资约束的影响机制研究****Research on the Influence Mechanism of Digital Inclusive Finance on Financing Constraints of Small and Medium-Sized Enterprises**

朱帮特, 曹广喜 ..... 1770

**硅透镜在双向梯度负折射率光子晶体中的亚波长聚焦研究****Subwavelength Focusing Study of Silicon Lenses in Bidirectional Gradient Negative Refractive Index Photonic Crystals**

尤露遥, 梁斌明, 姜超凡, 华昕怡 ..... 1787

**一种基于分类算法集成学习模型的金融信贷违约预测****An Ensemble Learning Model for Predicting Financial Credit Default Based on Classification Algorithm**

肖家鑫, 于莲芝 ..... 1797

基于改进 MobileNetV2 的中耳炎影像分类诊断模型

Otitis Media Image Classification and Recognition Model Based on Improved MobileNetV2

胡江婧, 张学典 ..... 1814

车辆方向盘自主回正系统机械部分的建模与分析

Modeling and Analysis of Mechanical Parts of Autonomous Steering Wheel Return System for Vehicles

汤灵燕 ..... 1830

基于变转速控制电动液压挖掘机能耗特性研究

Research on Energy Consumption Characteristics of Electric Hydraulic Excavator Based on Variable Speed Control

金徐婷 ..... 1841

基于仿真数据与深度学习驱动的液压多路阀故障诊断

Fault Diagnosis of Hydraulic Multiway Valve Driven by Simulation Data and Deep Learning

徐国勇 ..... 1852

基于 ABAQUS 的盘式制动器有限元分析

Finite Element Analysis of Brake Disc Based on ABAQUS

马清凯 ..... 1862

基于 ResNet 深度网络模型的髋关节置换术后并发症分类研究

Classification of Postoperative Complications after Hip Arthroplasty Based on the ResNet Deep Network Model

满孝壮, 王博永, 王俏杰, 李梅, 程云章, 沈灏 ..... 1873

海洋环境下具有原型的集成实例分割网络

Integrated Instance Segmentation Network with Prototypes in Marine Environment

李盼龙, 胡兴 ..... 1885

隐私保护下跨域电池储能系统智能均衡控制策略

Intelligent Balancing Control Strategy for Cross-Domain Battery Energy Storage Systems under Privacy Protection

谢祥祥, 田恩刚, 李磊 ..... 1895

45°弯管和不同曲率 90°弯管的实验与数值模拟研究

Experimental and Numerical Simulation of 45° Bending and 90° Bending with Different Curvatures

贺浩, 刘冬华, 黄振华, 周传辉 ..... 1908

基于离散滑模控制的音圈电机伺服系统

Servo System for Voice Coil Motor Based on Discrete Sliding Mode Control

曾浩炫, 陈光胜 ..... 1921

基于 ANSYS 的波形辐板车轮动力特性分析及结构优化

Dynamic Characteristic Analysis and Structural Optimization of Corrugated Wheel Based on ANSYS

金志尧, 赵大胜, 吕园园 ..... 1929