

TABLE OF CONTENTS

目 录

两个无界线性算子乘积的共轭算子 The Adjoint Operator of the Product of Two Unbounded Linear Operators 徐宇飞, 吴德玉	1
数字化技术如何赋能传统行业, 提升行业现代化水平 How Digital Technology Empowers Traditional Industries and Improves Industry Modernization 凌先冲, 葛畅	10
基数约束优化问题的内罚函数法 An Interior Penalty Algorithm for Cardinality-Constrained Optimization Problems 吴霜, 王雪纯	21
放疗下肿瘤细胞凋亡行为的异质性研究 Heterogeneity Study of Apoptosis Behavior of Tumor Cells during Radiotherapy 张政颖, 王梦婷	29
非契约关系下消费者价类迁移对卷烟结构升级的影响与预测研究 A Study on the Impact and Prediction of Consumer Price Class Migration on the Upgrading of Cigarette Structure under Non-Contractual Relationships 朱博文, 李安, 杨永来, 卢小锋	36
混合多核极化码指数的收敛性 Convergence of Hybrid Multi-Kernel Polar Codes Exponent 王彤, 金小雨, 杨卫华	47
自适应网络上的疾病传播 Epidemic Spreading on Adaptive Networks 曹忠盼	55
带扰动算子的 Landweber 迭代在 Hanke-Raus 准则下的收敛阶分析 Convergence Order Analysis of a Landweber Iteration with Perturbed Operators under the Hanke-Raus Rule 谷苒, 董超峰	61
N 股 Montesinos 纽结的着色 Jones 多项式 The Colored Jones Polynomial of N-String Montesinos Knots 马郡梓, 冷旭东, 班子涵	70
不同代谢目标下甘油代谢通量分布的模型与计算 Model and Calculation of Glycerol Metabolic Flux Distribution under Different Metabolic Targets 王梦婷, 张政颖	76

灰色预测模型在碳排放预测中的应用

Application of Grey Prediction Model in Carbon Emission Forecasting

何金泽, 熊婧秋, 黎欣茹, 黄婷, 余佳蔓 84

基于组合模型的新型镇静药物疗效分析与预测

Analysis and Prediction of Therapeutic Effect of New Sedative Drugs Based on Combination Model

康俊达, 汪波, 夏雅雯, 万优艳 91

一种求解带小参数的常微分方程的简化多尺度法

A Simplified Multiscale Method for Solving Ordinary Differential Equations with Small Parameters

范喜东 102

北京市空气质量的时间特征及影响因素分析

Analysis of Temporal Characteristics and Influencing Factors of Air Quality in Beijing

严彦文, 谢碧霄, 孟得新, 范申 118

基于概率统计方法证明若干组合恒等式

Proofs of Several Combinatorial Identities Based on Probability Statistics Method

徐晨, 常桂松 127

基于数学模型的中国新能源电动汽车发展主要因素分析及影响研究

Main Factors Analysis and Influence Research on the Development of China's New Energy Electric Vehicles Based on Mathematical Models

邵建鑫, 余浩, 何思 133

社区环境对农村老年人身心健康的影响研究

Research on the Impact of Community Environment on the Physical and Mental Health of Rural Elderly People

牛兵, 宗占红 141

基于非光滑约束的 Langevin 算法

Langevin Algorithms Based on Non-Smooth Constraints

曹嘉锋, 李春晔, 王薇 149

半二次图像复原中结构化方程组的预处理方法研究

A Review of Preconditioners for Structured Systems Arising from Half-Quadratic Image Restoration

孙舒恩, 王超杰, 刘碧玲, 陈婕 159

极大外平面图中树的 Anti-Ramsey 数

The Anti-Ramsey Number of Trees in Maximal Out-Planar Graph

周韦佳, 马华玮 169

高等教育体系的健康状况评价与探讨

Examination and Exploration of the Health Status of the Higher Education System

赵莉, 王颖, 孙加航 176

华中地区碳达峰预测 Carbon Peak Prediction in Central China 贾子易, 李俊华, 刘书景, 谭依琳.....	189
基于宏基因组分析的机器学习疾病预测模型构建 Construction of Machine Learning Disease Prediction Model Based on Macro-Genomic Analysis 张钰东	199
含 t-积结构的张量广义 Krylov 子空间方法求解线性离散不适定问题 The Tensor Generalized Krylov Subspace Method with t-Product Structure for Solving Linear Discrete Ill-Posed Problems 王仕伟	208
带有吸引型奇性的离散周期边值问题多重正解的存在性 Existence of Multiple Positive Solutions for Discrete Periodic Boundary Value Problems with a Singularity of Attractive Type 李雅琴, 路艳琼	217
基于 Pythagorean Hodograph T-曲线的过渡曲线的构造 Construction of Transition Curve Based on Pythagorean Hodograph T-Curve 杨雪, 彭兴璇	234
算子代数上保持 ξ-Lie 积的 c-数值域的映射 Maps Preserving the c-Numerical Range of ξ-Lie Product on Operator Algebras 田茹, 张艳芳	244
基于数据幂变换的 EEWMA 高质量过程控制 EEWMA High-Quality Process Control Based on Data Power Transformation 张亚洁, 宋学力, 王凯明, 直雪瑶.....	255
一类花图 $f(C_m, F_n)$ 的 Tutte 多项式 The Tutte Polynomials of a Class of Flower Graph $f(C_m, F_n)$ 周雪	269
基于傅里叶变换的跳跃 - 扩散模型及欧式期权定价 Fourier Transform-Based Jump-Diffusion Model and European Option Pricing 周琦力	278
一类病毒群体免疫最小免疫人口推断及检验 A Class of Virus Population Immunity Minimum Immune Population Inference and Testing 许宏飞, 尹明智, 唐亚林	285
基于组合赋权 - 可拓云模型的应用型本科高校数学教师能力评估方法 A Method for Evaluating the Ability of Mathematics Teachers in Applied Undergraduate Colleges and Universities Based on Combination Weighting Extension Cloud Model 林旭旭	293

基于 CNN-LSTM 模型的全球气温预测研究 Research on Global Temperature Prediction Based on CNN-LSTM Model	
张宇, 何青霞, 曾诗懿	302
不同氮水平下大豆与玉米单、间作氮素吸收的微分方程建模 Differential Equation Modeling of Nitrogen Uptake in Soybean and Maize Monoculture and Intercropping under Different Nitrogen Levels	
普雯瑞, 化存才	313
七次广义 Ball 曲线的两种扩展 Two Extensions of Generalized Ball Curves of Seventh Degree	
付雨楠, 严兰兰	331
基于卷积神经网络的遥感图像目标分类 Remote Sensing Image Target Classification Based on Convolutional Neural Networks	
岳启明, 陈皖龙, 闫玉龙	342
基于贝叶斯推断的地下水流模型非高斯源项场的识别 Research on Identification of Non-Gaussian Source Term Field in Subsurface Flow Model Based on Bayesian Inference	
黄千叶, 欧娜, 宋晓燕	349
基于多元统计方法的全国消费支出分类和差异研究 Research on the Classification and Difference of Consumption Expenditure in China Based on Multivariate Statistics	
翁鹏飞, 夏莉	360
基于超市商品补货策略的分析 Analysis on Supermarket Product Replenishment Strategy	
杨若涵, 张莹, 周文可	376
基于 $l_p - \alpha l_1$ 模型下的部分已知支集信号恢复的研究 Research on Partial Known Support Signal Recovery Based on $l_p - \alpha l_1$ Model	
吴丽君, 宋儒瑛	392
一类静电磁 Schrödinger-Maxwell 系统涡旋基态解的存在性 Existence of Vortex Ground State Solutions for a Class of Electromagnetostatic Schrödinger-Maxwell System	
姬玉萍, 滕凯民	401
任意凸四边形区域上二阶变系数椭圆边值问题有效的谱 Galerkin 逼近 Efficient Spectral Galerkin Approximation for Second Order Elliptic Boundary Value Problems with Variable Coefficient on Arbitrary Convex Quadrilateral Domain	
刘雪林, 张应洪, 施芳	414

一类 SIS 模型病原体毒力进化动力学分析

Evolutionary Dynamics Analysis of Pathogen Virulence in a Class of SIS Model

雷雅媛, 徐捷 430

标准布朗运动驱动下的 CIR 模型梯形数值方法

The Trapezoidal Numerical Method for the CIR Model Driven by Standard Brownian Motion

陈凯旋 444

基于启发式智能算法的多层网络路径规划研究

Multilayer Network Pathway Planning Research Based on a Heuristic Intelligence Algorithm

吴梦瑶, 李思禹, 熊宇帆, 杨欣彤, 李文学 453

关于 Kaczmarz 的一类加速免伪逆贪婪块方法

Accelerated Pseudo-Inverse-Free Greedy Block Methods in the Kaczmarz Algorithm Category

颜鑫鹏, 时文雅, 郇战 466