




# 河南科学

HENAN SCIENCE

 科学出版社  
Science Press

万方数据

# 河南科学

2022年 第40卷 第1期

## 目次

### 数学研究与信息科学

- 流动性视角下波动率指数期货定价:基于HAR模型的直接定价法 ..... (1)  
苏乐怡 乔高秀 蒋龔月
- 梯级电站一键顺控操作全流程加密方法 ..... (13)  
尤 渺 顾发英 贺增良 罗 旋

### 化学研究与力学研究

- 凝胶渗透色谱-十八角激光光散射仪(GPC-MALLS)在聚丙烯酰胺合成中的应用 ..... (19)  
林朝阳 郝小飞 霍炳臣 王冬梅 李天企 赵献增
- 基于流固耦合的柔性翼型动态失速特性研究 ..... (25)  
戴 昱 陈德龙 信志强

### 建筑科学与交通科学

- 预应力锚杆微型桩预支护深基坑模型试验研究 ..... (33)  
刘 川 刘雪玲 门玉明 杨 通
- 结构界面单膜电阻式微型土压力盒室内砂土标定方法研究 ..... (39)  
赵世永
- 薄壁空心高墩温度场与温度效应分析 ..... (46)  
毕志刚 闫向君 禹彦杰 梁 斌
- 基于现场试验的TBM隧道支护结构力学性能研究 ..... (54)  
赵向波 王利明 王 军 赵海雷
- 车辙深度对水利枢纽永久道路沥青路面高温稳定性的影响 ..... (59)  
罗 坤 马 力 徐 琴 贾玉豪
- 基于偏比例优势模型的农路评价影响因素分析——以河南省为例 ..... (66)  
单 飞 聂世刚

氧化石墨烯(GO)对沥青老化性能的影响研究 .....	(72)
应军志 汪海年 沈思立 叶旻 张琛	

## 地球科学与环境科学

经验模态分解滤波法用于时变重力场去噪研究 .....	(78)
艾尚校 肖云	
京津冀地区1981—2020年雾霾时空分布特征研究 .....	(86)
张禄 孙树鹏 程善俊 姜云雁 吴洋	
河南省浅层原生劣质地下水分布特征研究 .....	(93)
贾秀阁 吴冰华 王唯锦 刘沙沙	
基于Lasso回归和ARIMA模型的城市生活垃圾产生量预测——以宝鸡市为例 .....	(98)
房妮 俱国鹏 惠姣姣 雷霖	

## 区域经济与管理科学

营商环境对区域创新发展的效应研究 .....	(104)
尤航	
基于系统动力学的资源型地区创新生态系统运行机制及仿真——以山西省为例 .....	(113)
吕瑶 张爱琴	
创新生态位适宜度:评价指标体系设计及测算 .....	(123)
刘静 解茹玉	
山东省环境规制与经济高质量发展耦合研究 .....	(131)
黄昶生 邹于镇	
基于伙伴关系的超大型铁路项目科技创新组织韧性建设研究——以青藏铁路项目为例 .....	(141)
于琪 孙锐娇 王朝静	
基于兴趣点(POI)提取的农家乐空间分布及影响因素研究——以辽西五市为例 .....	(151)
李菲菲 朱斌	
服务综合效率(OSE)分析方法及其在服务业运营管理中的应用 .....	(158)
周文慧 戴睿琦 郑志斌 卢阳光	
基于参与程度和重要性的PPP项目利益相关者分析 .....	(165)
雷晓莹 刘珈琪	

# HENAN SCIENCE

Vol.40 No.1 2022

## CONTENTS

### Mathematics Research and Information Science

- Pricing of Volatility Index Futures from the Perspective of Liquidity: A Direct Pricing Method Based on HAR Model ..... (1)  
SU Leyi, QIAO Gaoxiu & JIANG Gongyue
- Encryption Method for Whole Process of One-key Sequence Control Operation of Cascade Power Stations ..... (13)  
YOU Miao, GU Faying, HE Zengliang & LUO Xuan

### Chemistry Research and Mechanics Research

- Application of Gel Permeation Chromatography-Eighteen Angles Laser Light Scattering(GPC-MALLS) in the Synthesis of Polyacrylamide ..... (19)  
LIN Chaoyang, HAO Xiaofei, HUO Bingchen, WANG Dongmei, LI Tianxian & ZHAO Xianzeng
- Study on Dynamic Stall Characteristics of the Flexible Airfoil Based on Fluid-structure Interaction ..... (25)  
DAI Yu, CHEN Delong & XIN Zhiqiang

### Construction Science and Transportation Science

- Model Test Research on Prestressed Anchor Micro-pile Pre-supporting Deep Foundation Pit ..... (33)  
LIU Chuan, LIU Xueling, MEN Yuming & YANG Tong
- Laboratory Sand Calibration Method of Single Membrane Resistance Miniature Earth Pressure Cell Set on the Structural Surface ..... (39)  
ZHAO Shiyong
- Analysis of Temperature Field and Temperature Effect of Thin-walled Hollow High Pier ..... (46)  
BI Zhigang, YAN Xiangjun, YU Yanjie & LIANG Bin
- Research on Mechanical Performance of TBM Tunnel Supporting Structure Based on Field Test ..... (54)  
ZHAO Xiangbo, WANG Liming, WANG Jun & ZHAO Hailei
- Effect of Rutting Depth on High Temperature Stability of Asphalt Pavement of Permanent Road in Hydraulic Complex ..... (59)  
LUO Kun, MA Li, XU Qin & JIA Yuhao
- Analysis of Factors Influencing the Evaluation of Rural Roads Based on Partial Proportional Odds Model: A Case Study of Henan Province ..... (66)  
SHAN Fei & NIE Shigang
- Effect of Graphene Oxide (GO) on the Anti-aging Properties of Asphalt ..... (72)  
YING Junzhi, WANG Hainian, SHEN Sili, YE Min & ZHANG Chen

## Earth Science and Environmental Science

- Empirical Mode Decomposition Filter for Temporal Gravity Field Denoising Study ..... (78)  
AI Shangxiao & XIAO Yun
- Spatial and Temporal Distribution Characteristics of Fog and Haze Weather in Beijing–Tianjin–Hebei Region  
from 1981 to 2020 ..... (86)  
ZHANG Lu, SUN Shupeng, CHENG Shanjun, JIANG Yunyan & WU Yang
- Distribution Characteristics of Shallow Original Poor Quality Groundwater in Henan Province ..... (93)  
JIA Xiuge, WU Binghua, WANG Weijin & LIU Shasha
- Prediction of Municipal Solid Waste Production Based on Lasso Regression and ARIMA Model: Taking Baoji  
as an Example ..... (98)  
FANG Ni, JU Guopeng, HUI Jiaojiao & LEI Ji

## Regional Economy and Management Science

- Research on the Effect of Business Environment on Regional Innovation and Development ..... (104)  
YOU Hang
- Operation Mechanism and Simulation of Innovation Ecosystem in Resource–based Regions Based on System  
Dynamics ..... (113)  
LYU Yao & ZHANG Aiqin
- Innovation Niche Fitness: Design and Measurement of Evaluation Index System ..... (123)  
LIU Jing & XIE Ruyu
- Coupling Research on Environmental Regulation and High–quality Economic Development in Shandong Province  
..... (131)  
HUANG Changsheng & ZOU Yuzhen
- Research on Organizational Resilience Construction of Scientific and Technological Innovation of Super–large  
Railway Project Based on Partnership: Taking Qinghai–Tibet Railway Project as an Example ..... (141)  
YU Qi, SUN Ruijiao & WANG Zhaojing
- Research on Spatial Distribution and Influencing Factors of Agritainment Based on POI Extraction: Take Five Cities  
in Western Liaoning as an Example ..... (151)  
LI Feifei & ZHU Bin
- Overall Service Effectiveness (OSE) Analysis Method and Its Application in Service Industry Operation  
Management ..... (158)  
ZHOU Wenhui, DAI Ruiqi, ZHENG Zhibin & LU Yangguang
- Stakeholder Analysis of PPP Project Based on the Degree of Participation and Importance ..... (165)  
LEI Xiaoying & LIU Jiaqi