

2022 5

大学数学

College
Mathematics
Daxue Shuxue

第38卷 第5期 2022年10月
Vol.38 No.5 Oct. 2022

ISSN 1672-1454
CN 34-1221/O1

主管单位：中华人民共和国教育部
主办单位：教育部高校大学数学课程教学指导委员会
合肥工业大学

大学数学

第三十八卷

第五期

二〇二二年十月

大学数学

2022 年 10 月

第 38 卷 第 5 期(总第 223 期)

目 录

专题研究

- 非自治离散系统中的有界复杂性及等度连续性 张瑞丰,朱姜慧(1)
- 矩阵广义逆与方程的解 翟佩佩,石欣侗,魏俊潮(6)
- 有限群的 u_c^* -正规子群 王雪影,乔守红(12)
- 等距对应视角下的测地线 吴钰莹,包图雅,刘晓周(17)
- Engel 定理与一类有限非幂零群 吴晓彤,陈 智(23)
- 典范对应分析数据模拟物种丰度计算方法 刘志丽,吴亚玲,周铁军(27)
- n 元二次函数的极值公式 管山林,马江涛,郭 震(36)

教学改革

- 新工科导向下大学数学课程创新能力培养体系的构建与实践 杨永富,胡 真,宫奕波(45)
- “强基计划”导向下数学专业本科生自主学习能力培养研究 王文龙,安 勇,田佳滨(52)
- 关于研究生课程数学写作指导的教学探索 韩茂安(57)

教学研究

- 关于正切函数的一个不等式的注记 李 平(64)
- 几类广义凸函数的等价刻画 韩淑霞,韩志斌,黄永忠(67)
- 内积空间矛盾方程组最小二乘解理论 郑素佩,封建湖,宋学力(74)
- 协方差不等式的若干证明及其注记
——兼论大学数学各学科教学的融合 欧阳顺湘(81)
- 关于矩阵的中心化子的刻画 任芳国,和嘉琪,周红军(89)
- 一道全国大学生数学竞赛决赛试题的推广 唐 烁,刘 俊,杨 威(98)
- 一类数列极限的推广与应用 戴立辉,黄建吾,王宜洁(101)
- 求一类不定方程 $x^2 + y^2 = z^m$ 的正整数解 戴中林(108)
- 国外大学生数学竞赛简介 陈皓然(113)

学生习作

- 正规矩阵的刻画 曹妍妍,陆炎珂,魏俊潮(120)

问题与征解

- 问题 19 与问题 20 (125)
- 问题 10 解答 (125)

COLLEGE MATHEMATICS

Vol. 38 No. 5(Serial No. 223) Oct. 2022

CONTENTS

Bounded Complexity and Equicontinuity of Nonautonomous Discrete Dynamical Systems	ZHANG Ruifeng,ZHU Jianghui(1)
Generalized Inverses of Matrices and Solutions of Equations	ZHAI Peipei,SHI Xintong,WEI Junchao(6)
u_c^* -Normal Subgroups of Finite Groups	WANG Xueying,QIAO Shouhong(12)
Geodesic in the Perspective of Isometric Correspondence	WU Yuying,BAO Tuya,LIU Xiaozhou(17)
Engel Theorem and a Class of Finite Non-nilpotent Groups	WU Xiaotong,CHEN Zhi(23)
Species Abundance Calculation Method of Canonical Correspondence Analysis Data Simulation	LIU Zhili,WU Yaling,ZHOU Tiejun(27)
Study on the Extreme Value Problems of the Quadratic Functions with n Variables	GUAN Shanlin,MA Jiangtao,GUO Zhen(36)
The Construction and Practice of the Innovation Ability Training System of College Mathematical Curriculum under the Guidance of New Engineering Disciplines	YANG Yongfu,HU Zhen,GONG Yibo(45)
Research on the Cultivation of Independent Learning Ability of Mathematics Undergraduates under the Guidance of “Strengthening Basic Disciplines Plan”	WANG Wenlong,AN Yong,TIAN Jiabin(52)
Exploration and Practice on the Course of Mathematical Writing Guidance	HAN Maoan(57)
A Remark on the Inequality Related to the Tangent Function	LI Ping(64)
Equivalent Characterizations of Several Classes of Generalized Convex Functions	HAN Shuxia,HAN Zhibin,HUANG Yongzhong(67)
Least Square Solution Theory of Contradictory Equations in Inner Product Space	ZHENG Supei,FENG Jianhu,SONG Xueli(74)
Proofs of Covariance Inequality with a Note on the Interdisciplinary Teaching of College Mathematics	OUYANG Shunxiang(81)
On the Characterization of the Centralizers of Matrices	REN Fangguo,HE Jiaqi,ZHOU Hongjun(89)
The Popularization of a Final Question in the National Mathematics Competition for College Students	TANG Shuo,LIU Jun,YANG Wei(98)
Extension and Application of a kind of Sequence Limit	DAI Lihui,HUANG Jianwu,WANG Yijie(101)
Finding Positive Integer Solutions of a Class of Indefinite Equations	DAI Zhonglin(108)
Foreign Undergraduate Mathematical Competitions: An Introduction	CHEN Haoran(113)
Characterizations of Normal Matrices	CAO Yanyan,LU Yanke,WEI Junchao(120)
Problem 19 and Problem 20	(125)
Solution to Problem 10	(125)