

# 大学数学

2018年2月

第34卷 第1期(总第195期)

## 目 录

### 专题研究

- Orlicz 空间内两类插值逼近的 Stechkin-Marchaud 不等式 ..... 孙芳美, 吴嘎日迪(1)  
一类含有脉冲免疫和治疗的 SIR 流行病的分析 ..... 朱芳芳, 唐雪凝, 孟新柱(7)  
广义 Peterson 图的着色问题研究 ..... 张桂芝, 安永红, 敖特根(13)  
具有主观取值倾向的离散灰数关联模型 ..... 熊萍萍, 孙 鑫, 姚天祥, 王正新(18)  
无限域上一维热传导方程的 Gauss-Laguerre 数值解 ..... 闵 涛, 臧顺全(25)  
具有乘积型 Allee 效应的 Leslie-Gower 捕食模型的动力学 ..... 雷小雪(31)  
整除在初等数论中的应用 ..... 夏建慧(36)  
某些  $2 \times 2$  分块矩阵的群逆 ..... 张志旭, 李 岚, 赵宝江(45)  
Simpson 校正公式误差的精确表示 ..... 孙 倩(48)

### 数学应用

- 诸葛亮《隆中对》优化模型 ..... 梅正阳(51)

### 教学改革

- 借力 MOOC 的微积分教学改革研究 ..... 夏 红, 高 建, 黄廷祝(57)  
基于 OpenGL 构建高等数学辅助教学系统初探 ..... 徐畅凯, 徐文华(62)

### 教学研究

- 平方凸函数 Hermite-Hadamard 型不等式的改进 ..... 时统业, 秦 华, 吴 涵(70)  
单位圆盘的全纯自同构的推广 ..... 涂振汉(77)  
正规子群求解方法的一个注记 ..... 陈一萍(80)  
幂压缩映射原理在分数阶常微分方程中的应用 ..... 陈鹏玉, 杨 娟, 张锁兵, 葛阳祖(84)  
常系数非齐次线性微分方程的变量替换法 ..... 范周田, 张汉林(89)  
一个特定型积分不等式若干推广的注记 ..... 华梦霞, 陈 庆(94)  
特定条件下广义伯努利方程的求解方法及其应用 ..... 吴慧卓, 李换琴, 齐雪林(96)  
平面图形面积计算公式的注记 ..... 黄永忠, 刘继成(100)  
椭圆弧长的级数表达式及其近似计算 ..... 冯有宽(106)  
到二元几何元素距离的和(差)积(商)为定值的点的轨迹 ..... 黄保军(111)  
一道全国大学生数学竞赛题的探讨 ..... 雷冬霞, 黄永忠, 吴 洁(118)

### 学生习作

- 平面上同分母有理点的稠密性及其应用 ..... 杨智强, 王仙桃(123)

# COLLEGE MATHEMATICS

Vol.34 No.1 (Serial No. 195) Feb. 2018

## CONTENTS

The Stechkin-Marchaud Inequality for Two Types of Interpolation Approximation in Orlicz Spaces .....	SUN Fang-mei,WU Garidi(1)
Analysis of a Nonlinear SIR Epidemic Model with Pulse Vaccination and Treatment .....	ZHU Fang-fang,TANG Xue-ning,MENG Xin-zhu(7)
The Coloring Problem for Generalized Peterson Graph .....	ZHANG Gui-zhi,AN Yong-hong,AO Te-gen(13)
Incidence Degree Model of Discrete Gray Number with Subjective Valued Orientation .....	XIONG Ping-ping,SUN Xin,YAO Tian-xiang,WANG Zheng-xin(18)
The Gauss-Laguerre Numerical Solution of 1D DCHPs on the Infinite Domain .....	MIN Tao,ZANG Shun-quan(25)
Dynamics of the Leslie-Gower Predator-Prey Model with the Multiplicative Allee Effect .....	LEI Xiao-xue(31)
The Application of the Divisibility in Elementary Number Theory .....	XIA Jian-hui(36)
Group Inverse of Some $2 \times 2$ Block Matrices .....	ZHANG Zhi-xu,LI Lan,ZHAO Bao-jiang(45)
Exact Representation of the Error of the Simpson Correction Formula .....	SUN Qian(48)
Optimization Models of Zhu Geliang “Longzhong Dui” .....	MEI Zheng-yang(51)
Research on the Calculus Teaching Reform Based on the Massive Open Online Courses .....	XIA Hong,GAO Jian,HUANG Ting-zhu(57)
Preliminary Research on the Advanced Mathematics Aided Teaching System Based on OpenGL .....	XU Chang-kai,XU Wen-hua(62)
The Improvement of Hermite-Hadamard Type Inequality for Square Convex Functions .....	SHI Tong-ye,QIN Hua,WU Han(70)
A Generalization of Holomorphic Automorphism on the Unit Disc .....	TU Zhen-han(77)
A Note on the Normal Subgroups .....	CHEN Yi-ping(80)
Application of Power Compression Mapping Principle in Fractional Ordinary Differential Equations .....	CHEN Peng-yu,YANG Juan,ZHANG Suo-bing,GE Yang-zu(84)
Method of Variable Substitution to Solve the Non Homogeneous Lineal Differential Equation with Constant Coefficients .....	FAN Zhou-tian,ZHANG Han-lin(89)
A Note on Some Generalization of a Specific Type Definite Integral Inequality .....	HUA Meng-xia,CHEN Qing(94)
Solution and Application to the Generalized Bernoulli Equation Under a Special Case .....	WU Hui-zhuo,LI Huan-qin,QI Xue-lin(96)
A Remark on Calculation Formulas of Plane Area .....	HUANG Yong-zhong,LIU Ji-cheng(100)
Series Expansion and Approximate Treatment for Elliptic Arc Length .....	FENG You-kuan(106)
The Locus of Points with Equal Sum (Difference) and Product (Quotient) of Distances to Binary Geometric Elements .....	HUANG Bao-jun(111)
Studies on a Variety of Solutions for a Question of the National Mathematics Competition .....	LEI Dong-xia,HUANG Yong-zhong,WU Jie(118)
The Density of Rational Points with the Same Denominators on the Plane and its Application .....	YANG Zhi-jiang,WANG Xian-tao(123)