

Journal of

## Mathematical Research with Applications

数学研究及应用

ISSN 2095-2651



Vol.43423

## Journal of Mathematical Research with Applications

Vol.43 No.4 (Sum No.201)

## Contents

 $\mathrm{July}\ 2023$ 

Research Papers
Half inverse Riordan arrays and their related vertical recurrence relation
On the skew spectral moments of trees and unicyclic graphs
The chemical trees with minimum inverse symmetric division deg index
Xiaoli LI, Yangling SHAO, Yubin GAO (399)
The injective chromatic index of a claw-free subcubic graph is at most 6
Xiaoyuan DONG, Yuquan LIN, Wensong LIN (409)
Quasi-central semicommutative rings
Relative $(b,c)$ -inverses with respect to a ring endomorphism
Jun JIAO, Wenxi LI, Liang ZHAO (433)
Verma modules over some Lie algebras of W-typeCongcong CHEN, Yongsheng CHENG (447)
Grand generalized weighted Morrey spaces for RD-spaces
Existence result to a class of parabolic equations with nonstandard growth condition and
zero order termZhongqing LI (467)
A general existence principle for fixed point theorems in one parameter case of
soft $D_a$ -metric space Jeena M S, Lovelymol SEBASTIAN (477)
Isoperimetric upper bounds and Reilly-type inequalities for the first eigenvalue of
the p-biharmonic operatorXuesen QI, Yunguang YUE, Ximin LIU (487)
On Heegaard splittings with finitely many pairs of disjoint compression disks



## Journal of Mathematical Research with Applications

Formerly Journal of Mathematical Research and Exposition Bimonthly Founded in 1981

Supervised by

The Ministry of Education of the People's Republic of China

Sponsored by

Dalian University of Technology &

China Society for Industrial and Applied Mathematics
Lei GUO & Renhong WANG

Edited & Published by

**Editors-in-Chief** 

The Editorial Office of Journal of

Mathematical Research with Applications

Address: No.2 Linggong Road, Ganjingzi District

Dalian 116024, P. R. China

Printed by

Dalian Jinhuaguang Color Printing Co., Ltd.

Distributed In China by Local Post Offices;

Overseas by China National Publications

Import & Export (Group) Corporation