

**THE JOURNAL
OF THE
INDIAN MATHEMATICAL SOCIETY**

ISSN (Print): 0019-5839
ISSN (Online): 2455-6475

NEW SERIES

Volume 91, Numbers 3-4
JULY–DECEMBER 2024
(PUBLISHED IN JULY 2024)

Editor-in-Chief
PEEYUSH CHANDRA

Published by the Indian Mathematical Society
Co-Published Online by Informatics Publishing Limited, Bangalore
“Online issues are available at <http://informaticsjournals.com/index.php/jims>”

I M S
INDIAN MATHEMATICAL SOCIETY

INFORMATICS
A Passage to Knowledge

The Journal of the Indian Mathematical Society
EDITORIAL BOARD

Editor-in-Chief: Peeyush Chandra, Formerly at Indian Institute of Technology, Kanpur (India)

Sukumar Das Adhikari,
Ramakrishna Mission Vivekananda Educational
and Research Institute, Belur (India)

George E. Andrews,
The Pennsylvania State University, USA

Gautam Bharali,
Indian Institute of Science, Bangalore (India)

Pratulananda Das,
Jadavpur University, Kolkata (India)

Erdal Karapinar,
Cankaya University, Ankara, Turkey

Shiv Datt Kumar
MNNIT Prayagraj, (India)

Gadadhar Misra,
Indian Statistical Institute, Bangalore (India)

A. K. Nandakumaran,
Indian Institute of Science,
Bangalore (India).

Pratima Panigrahi,
Indian Institute of Technology Kharagpur,
Kharagpur, (India)

Vamsi Pritham Pingali,
Indian Institute of Science,
Bangalore (India)

Dipendra Prasad,
Indian Institute of Technology Bombay,
Mumbai (India).

G. P. Raja Sekhar,
Indian Institute of Technology,
Kharagpur (India)

M. A. Sofi,
J. K. Institute of Mathematical Sciences,
Srinagar (India)

K. Srinivas,
The Institute of Mathematical Sciences,
Chennai (India)

S. K. Tomar,
Panjab University, Chandigarh (India).

V. Vetrivel,
Indian Institute of Technology Madras,
Chennai (India)

Michel Waldschmidt,
Emeritus Professor,
Sorbonne University, France.

Ravi P. Agarwal,
Texas A&M University
Kingsville, USA.

Nayandeep Deka Baruah,
Tezpur University, Tezpur (India).

Sameer Chavan,
Indian Institute of Technology, Kanpur (India).

Pankaj Jain ,
ISouth Asian University, Delhi, (India).

S. S. Khare,
Formerly at NEHU, Shillong (India).

Arvind Kumar Misra,
Banaras Hindu University, Varanasi (India)

Siddhartha Mishra,
ETH Zurich, Switzerland

Seshadev Padhi,
Birla Institute of Technology,
Mesra, Ranchi (India).

M. A. Pathan,
Formerly at Aligarh Muslim University,
Aligarh (India)

S. Ponnusamy,
Indian Institute of Technology Madras,
Chennai (India)

V. Ravichandran,
National Institute of Technology,
Tiruchirappalli (India)

Rajen Kumar Sinha,
Indian Institute of Technology,
Guwahati (India).

K. Sreenadh,
Indian Institute of Technology,
Delhi (India).

S. Sundar,
Indian Institute of Technology Madras,
Chennai (India).

Jugal K. Verma
Panjab University, Chandigarh, (India)

Ambat Vijayakumar
Cochin University of Science and Technology,
Cochin, (India)

Managing Editor: M. M. Pawar,
Formerly at K. B. C. North Maharashtra University,
Jalgaon (India)

**THE JOURNAL
OF THE
INDIAN MATHEMATICAL SOCIETY**

**ISSN (Print): 0019-5839
ISSN (Online): 2455-6475**

NEW SERIES

**Volume 91, Numbers 3-4
JULY–DECEMBER 2024
(PUBLISHED IN JULY 2024)**

**Editor-in-Chief
PEEYUSH CHANDRA**

Published by the Society
Co-Published Online by Informatics Publishing Limited, Bangalore
“Online issues are available at <http://informaticsjournals.com/index.php/jims>”

I M S
INDIAN MATHEMATICAL SOCIETY

INFORMATICS
A Passage to Knowledge

Paper Submission:

The authors should prepare the manuscript in \LaTeX by following the, ‘ Instructions to Authors ’ at

<https://www.informaticsjournals.com/index.php/jims/ia>

The pdf of manuscript should be submitted to the Journal of Indian Mathematical Society online after registration at

www.informaticsjournals.com/index.php/jims/user/register

In case of any problem in submission of manuscript contact at journal.ims1910@gmail.com

Manuscripts (including bibliographies, tables, etc.) should be typed double spaced in \LaTeX . Sections should appear in the following order. Title page, Abstract, Keywords and Phrases, AMS Subject Classification (<https://zbmath.org/classification/>), Text, Notes and References.

While typing in \LaTeX , the following Preamble be used:

```
\documentclass[10pt, a4]{amsart}
\usepackage{amsfonts, amssymb, amscd, amsmath, enumerate, verbatim}
\renewcommand{\baselinestretch}{1.2}
\textwidth = 12 cm
\textheight = 19.5 cm
\topmargin = 0.5 cm
\oddsidemargin = 1.5 cm
\evensidemargin = 1.5 cm
\pagestyle{plain}
```

There are no page charges. Authors of a paper published in the Journal will be provided a pdf file of their paper.

Copyright of the published articles lies with the Indian Mathematical Society.

This volume or any part thereof may not be reproduced in any form without the written permission of the publisher.

This volume is not to be sold outside the country to which it is consigned by the Indian Mathematical Society.

CONTENTS

1.	Sonali Sahu, Shanta Kumari Sunanda.	A weighted Hardy-type inequality in time scale.	287–302
2.	Zied Douzi, Bilel Selmi.	The outer regularity of the Hewitt- Stromberg measures in a metric space and applications.	303–320
3.	B. Thalimi, C. Jayasri.	Some problems related to totally positive functions and totally bounded functions.	321–327
4.	M. Routaray, A. Behera.	Categorical construction of minimal model of lie algebra.	328–337
5.	Saleh Shakeri.	On a class of (p, q) -Laplacian nonlinear system involving nonlocal operators.	338–343
6.	Mriganka S. Dutta, Helen K. Saikia.	Factorization of a Formal Power Series with constant term certain power of a prime.	344–355
7.	Renukadevi S. Dyavanal, Jyoti V. Channadasar.	Uniqueness of Linear Differential Polynomial and Shift of a Meromorphic Function.	356–365
8.	Prasenjit Ghosh, T. K. Samanta.	Continuous controlled generalized fusion frames in Hilbert spaces.	366–387
9.	P. V. Anjali, Amit Kumar Pal, Jhuma Sen Gupta.	On a posteriori error bound for weak Galerkin finite element method for semilinear parabolic problems.	388–399
10.	Shyam Lal, Harish Chandra Yadav.	Extended Chebyshev Wavelet of First Kind and its Applications in Approximation of a Function Belonging to Hölder's Class and Solution of Fredholm Integral Equation of Second Kind.	400–415
11.	Nazneen Khan, Mohammad Imran Idrisi, Manal Al-labadi, Areej Al-Balawi, Eman Almuher.	On some Nörlund \mathcal{I} -Convergent Double Sequence Spaces of \mathcal{M} -Orlicz Functions.	416–425

- | | | | |
|-----|---|--|----------|
| 12. | G. S. Saluja. | Results for coupled fixed point in partial metric spaces via contractive type condition involving rational term. | 426–445 |
| 13. | Amar Pal Verma,
Rasmita Kar. | Existence of three solutions for a class of nonlocal Neumann problem. | 446–451 |
| 14. | Swati Bhardwaj,
Madhu Raka. | Skew Cyclic Codes Over A Finite Ring : A Note on a result of Mohammadi et al. | 452–456 |
| 15. | M. S. Shabna,
M. C. Ranjini. | On the study of ψ -Caputo fractional neutral functional differential equation. | 457–469 |
| 16. | P. L. Sharma,
Mansi Harish,
Sushil Kumar. | Some permutation trinomials over finite fields $\mathbb{F}_{2^{2m}}$. | 470–477 |
| 17. | Sarasvati Yadav,
Shaifali. | On Models of the Lie Algebra $\mathcal{G}_{u,v}$ and Euler Integral Transformation. | 478–489 |
| 18. | K. N. Darji,
R. G. Vyas. | Generalized absolute convergence of double Walsh-Fourier series. | 490–498 |
| 19. | Nita Tamang,
Bishal Tamang. | Ohno-Zagier relation for interpolated q -multiple zeta values with full height. | 499–510 |
| 20. | Prince Ashvinbhai Bhuva,
Bhikha Lila Ghodadra. | On the absolute Nörlund summability of double Fourier series. | 511–536 |
| 21. | D. Pradeep,
E. Shinelal,
V. Ananthalakshmy. | An Inverse and Derivative Free Regularized Iterative Scheme for Nonlinear Ill-posed Monotone Operators. | 537–549 |
| 22. | Gauri Agrawal,
A. K. Agrawal
Joydip Dhar | Effects of human population and atmospheric pollution on rainfall: A modeling study | 550–564 |
| 23. | Vivek Kumar Jain,
Raja Rawat. | Erratum and addendum. | 565–569. |