ISSN: 2738-9928 (Online) 2738-9812 (Print)

NEPAL JOURNAL OF MATHEMATICAL SCIENCES (NJMS)



Published by

SCHOOL OF MATHEMATICAL SCIENCES

Tribhuvan University, Kirtipur Kathmandu, Nepal

Volume 6, Number 2

August 2025

NEPAL JOURNAL OF MATHEMATICAL SCIENCES (NJMS)

ISSN: 2738-9928 (Online), 2738-9812 (Print) Volume-6, Number -2 (August 2025)

Editorial Team

Advisors

Prof. Dr. Shankar Prasad Khanal, Dean, Institute of Science and Technology, Tribhuvan University, Nepal **Assoc. Prof. Nawaraj Paudel**, Director, School of Mathematical Sciences, Tribhuvan University, Nepal

Editorial Board

Prof. Dr. Narayan Prasad Pahari (Editor-in-Chief)

Central Department of Mathematics, Tribhuvan University, Kirtipur, Kathmandu, Nepal

Prof. Dr. Subarna Shakya (Member)

Institute of Engineering, Tribhuvan University, Pulchowk, Lalitpur, Nepal

Prof. Dr. Srijan Lal Shrestha (Member)

Central Department of Statistics, Tribhuvan University, Kirtipur, Kathmandu, Nepal

Prof. Dr. Gyan Bahadur Thapa (Member)

Institute of Engineering, Tribhuvan University, Pulchowk, Lalitpur, Nepal

Editors

Prof. Dr. Bal Krishna Bal, Department of Computer Engineering, Kathmandu University, Nepal

Prof. Dr. Binod Chandra Tripathy, Department of Mathematics Tripura University, India

Prof. Dr. Chet Raj Bhatta, Central Department of Mathematics, Tribhuvan University, Nepal

Prof. Dr. Danda Bir Rawat, Department of Computer Science, Howard University, Washington, DC, USA

Prof. Dr. Dil Bahadur Gurung, School of Natural Sciences, Kathmandu University, Nepal

Prof. Dr. Dinesh Panthi, Department of Mathematics, Nepal Sanskrit University, Nepal

Prof. Dr. Dipak Kumar Jana, Applied Science, Haldia Institute of Technology, W.B., India

Prof. Dr. Jyotsna Kumar Mandal, Department of Computer Sciences, Kalyani University, West Bengal, India

Prof. Dr. Narayan Adhikari, Central Department of Physics, Tribhuvan University, Nepal

Prof. Dr. Ram Prasad Ghimire, School of Natural Sciences, Kathmandu University, Nepal

Prof. Dr. Vijay Kumar, Department of Statistics, DDU Gorakhpur University, India

Prof. Dr. Vikash Kumar KC, Department of Statistics, Prithwi Narayan Campus, Tribhuvan University, Nepal

Prof. Dr. Vikash Raj Satyal, Department of Statistics, Amrit Campus, Tribhuvan University, Nepal

Dr. Badri Adhikari, Department of Computer Science, University of Missouri-St. Louis, USA

Dr. Bishnu Hari Subedi, Central Department of Mathematics, Tribhuvan University, Nepal

Dr. Chakra Bahadur Khadka, School of Mathematical Sciences, Tribhuvan University, Nepal

Dr. Debendra Banjade, Department of Mathematics, Coastal Carolina University, USA

Dr. Durga Jang KC, Central Department of Mathematics, Tribhuvan University, Nepal

Dr. Ganesh B. Malla, Department of Statistics, University of Cincinnati – Clermont, USA

Dr. Ghanshyam Bhatt, Department of Mathematics, Tennessee State University, USA

Dr. Ishwari Jang Kunwar, Department of Mathematics & Computer Science, Fort Valley State University, USA

Dr. Milan Bimali, Department of Biostatistics, University of Arkansas for Medical Sciences, USA

Dr. Parameshwari Kattel, Dept. of Mathematics, Trichandra Multiple Campus, Tribhuvan University, Nepal

Dr. Rama Shanker, Department of Statistics, Assam University, Silchar, India

Dr. Sahadeb Upretee, Department of Actuarial Science, Central Washington University, USA

Dr. Shree Ram Khadka, Central Department of Mathematics, Tribhuvan University, Nepal

Managing Coordinator

Mr.Keshab Raj Phulara, School of Mathematical Sciences, Tribhuvan University, Nepal

NEPAL JOURNAL OF MATHEMATICAL SCIENCES (NJMS Volume-6, Number-2 (August, 2025)

©School of Mathematical Sciences, Tribhuvan University

The views and interpretations in this journal are those of the author(s) and they are not attributable to the School of Mathematical Sciences, Tribhuvan University.

The Nepal Journal of Mathematical Sciences (NJMS) is now available on NepJOL at https://www.nepjol.info/index.php/njmathsci/index

MAILING ADDRESS

Nepal Journal of Mathematical Sciences

School of Mathematical Sciences Tribhuvan University, Kirtipur Kathmandu, Nepal

Website: www.sms.tu.edu.np

Email: njmseditor@gmail.com

Editorial

We are pleased to announce the publication of Volume 6, Issue 2 (2025) of the *Nepal Journal of Mathematical Sciences (NJMS)*. This issue features eight original research papers covering a wide range of topics in mathematics and its applications.

We extend our special thanks to all the contributing authors for their valuable research, and express our deep appreciation to the editorial board and reviewers for their dedication, timely feedback, and scholarly contributions that have been instrumental in bringing this issue in time.

We now invite researchers, faculty members, and scholars to submit their original research articles for consideration in Volume 7, Issue 1. Your continued contributions are vital to the advancement of mathematical sciences and the strengthening of our academic community.

Thank you for your ongoing support and engagement with NJMS.

Editor-in-Chief August 30, 2025

CONTENTS

| SN | Article Titles and Authors | Pages No. |
|----|--|-----------|
| 1. | On the Generalized Complex 2 nd Order Recurrences | 1-12 |
| | □ K. L. Verma | |
| | DOI: https://doi.org/10.3126/njmathsci.v6i2.83825 | |
| 2. | Some Common Fixed Point Theorems in Fuzzy b-Metric Space | 13-22 |
| | Using Convergent Sequence | |
| | ☐ Thaneshor Bhandari, K.B. Manandhar & Kanhaiya Jha | |
| | DOI: https://doi.org/10.3126/njmathsci.v6i2.83822 | |
| 3. | On Operation over Fermatean Fuzzy Sets: An Application to a | 23-36 |
| | de-i-Fuzzification Technique | |
| | S. K. Shukla, Anupam Kumar, Anita Kumari, Shivalika Saxena | |
| | & Deepak Kumar | |
| | DOI: https://doi.org/10.3126/njmathsci.v6i2.83823 | |
| 4. | Some Fixed Point Theorems and Applications to Noise Reduction in | 37-46 |
| | Signal Processing | |
| | □ C. Iluno, J. O. Olaleru , H. Akewe & Nabaraj Adhikari | |
| | DOI: https://doi.org/10.3126/njmathsci.v6i2.83824 | |
| 5. | Analysis of Blood Flow Through an Overlapping Mild Stenosis | 47-58 |
| | 🗆 Tuk Bahadur Rana, Jeevan Kafle & Puspa Nidhi Gautam | |
| | DOI: https://doi.org/10.3126/njmathsci.v6i2.83831 | |
| 6. | Generalized Difference Sequence Spaces with Ideal Convergence in n- | 59-66 |
| | Normed Spaces | |
| | □ Gobinda Adhikari & Jhavi Lal Ghimire | |
| | DOI: https://doi.org/10.3126/njmathsci.v6i2.83829 | |
| 7. | Leonardo Numbers and their Bicomplex Extension | 67-76 |
| | □ Molhu Prasad Jaiswal, Narayan Prasad Pahari & Purushottam Parajuli | |
| | DOI: https://doi.org/10.3126/njmathsci.v6i2.83832 | |
| 8. | Age-specific Mortality Rates in Nepal by Using Lee-Carter Model | 77-88 |
| | □ Sudhan Paudel & Keshab Raj Phulara | |
| | DOI: https://doi.org/10.3126/njmathsci.v6i2.83833 | |