

Volume 8 Number 1
February 2026

ISSN 2562-2854(print)
ISSN 2562-2862(online)

Journal of Nonlinear Modeling and Analysis

Editors-in-Chief

Maoan Han & Junling Ma

 Global Science Press



Zhejiang Normal University

Journal of Nonlinear Modeling and Analysis

Volume 8, Number 1

February 2026

Contents

- 1 **New Refinements of Hermite-Hadamard Inequalities for Quantum Integrals**
Hüseyin Budak
- 9 **Bullen-Type Fractional Integral Inequalities Involving Twice-Differentiable Mappings with Applications**
Mehmet Zeki Sarıkaya, Tuba Tunç and İzzettin Demir
- 30 **A Mathematical Modeling of Two-Strain Tuberculosis Transmission: Deterministic and Stochastic Approaches to Screening, Treatment, and Quarantine Strategies**
A. Muhammad Mu'adz, Kasbawati, Syamsuddin Toaha and Muhammad Rifqy Adha Nurdiansyah
- 52 **Local Ground-State and Mountain Pass Solutions for a p -Kirchhoff Equation with Critical Exponent**
Juan Mayorga-Zambrano, Henry Cumbal-López, Daniel Narváez-Vaca and Jordy Cevallos-Chávez
- 72 **MEK Inhibition may Prevent the Recruitment of NK Cells in the Tumor Microenvironment: A Mathematical Model of Glioma Treatment**
Amine Alabkari, Ahmed Kourrad and Khalid Adnaoui
- 94 **Existence Results for a Generalized $p(x)$ -biharmonic Problem Type with No-flux Boundary Condition**
Youssef Zine.eddine, Mohamed Talbi, Najib Tsouli and Mohammed Filali
- 110 **The Impact of Educational Campaigns on the Global Dynamics of Cholera Epidemics**
Zexin Sun and Xiongxiang Bao
- 131 **Stability Analysis of a Diffusive Ratio-Dependent Predator-Prey Model with Nonlocal Perception**
Lu Zheng and Yahong Peng
- 145 **Generalized Variational Inclusion Problem Involving Averaged Operator and Cayley Operator**
Mohd. Falahat Khan, Syed Shakaib Irfan and Rais Ahmad
- 160 **On the Numerical Solution of Solidification of Water**
Abdellatif Boureghda and Soumaya Belabbes

Journal of Nonlinear Modeling and Analysis

Volume 8, Number 1

February 2026

Contents

- 170 Nonlinear Dynamics and Pull-In Phenomena in a Magneto-Electro MEMS Actuator with Hardening Spring**
Lijun Zhang and Jun Ma
- 185 Optimal Control Approach for Bilateral Elastic Contact Problem with Power-Law Friction**
O. Atelaue, Z. Faiz, R. Bouchantouf and H. Benaissa
- 198 Analysis of a Fractional Order Eco-epidemiological Model with Prey Infection and Predator Cannibalism**
S. Karthikeyan, M. Sambath, K. Balachandran and M. S. Muthuvalu
- 217 Cross-Invariant Sets of the Cubic Nonlinear Schrödinger System with Partial Confinement**
Xinlu Zhou and Jian Zhang
- 229 ESS in a River Network with Two Branches**
Gongyi Jin, Xiaoqian Feng and Peng Zhou