

# Table of Contents

**Volume 8 Number 7**
**July 2020**
**Study of the 1D Saint-Venant Equations and Application to the Simulation of a Flood Problem**

- M. Y. A. Kader, R. Badé, B. Saley.....1193

**Momentum Eigensolutions of Feinberg-Horodecki Equation with Time-Dependent Screened Kratzer-Hellmann Potential**

- M. Farout, S. M. Ikhdaire.....1207

**Numerical Modeling of Dust Propagation in the Atmosphere of a City with Complex Terrain. The Case of Background Eastern Light Air**

- A. Surmava, V. Kukhalashvili, N. Gigauri, L. Intskirveli, G. Kordzakhia.....1222

**Sharps Bounds for Power Mean in Terms of Contraharmonic Mean**

- Z. I. Almuhiameed.....1229

**Exact Soliton-Like Spherical Symmetric Solutions of the Heisenberg-Ivanenko Type Nonlinear Spinor Field Equation in Gravitational Theory**

- A. Adomou, J. Edou, V. I. S. Hontinfinde, S. Massou.....1236

**Hidden Properties of Mathematical Physics Equations. Double Solutions. The Realization of Integrable Structures. Emergence of Physical Structures and Observable Formations**

- L. I. Petrova.....1255

**Traversable Wormholes and the Brouwer Fixed-Point Theorem**

- P. K. F. Kuhfittig.....1263

**Frobenius Method for Solving Second-Order Ordinary Differential Equations**

- A. Torabi, M. A. Rohani.....1269

**Lefschetz Thimbles and Wigner Functions**

- V. S. Filinov, A. S. Larkin.....1278

**Continuous Dependence for the Linear Differential Equations of Thermo-Diffusion**

- J. C. Shi.....1291

**Phenomena in Polarized Disperse Systems Caused by Exchange-Correlation Interaction between Particles**

- V. F. Kharlamov.....1304

**Existence Result for Fractional Klein-Gordon-Maxwell System with Quasicritical Potential Vanishing at Infinity**

- C. L. Gan, T. Xiao, Q. F. Zhang.....1318

**Mathematical Model of HIV-1 Dynamics with T Cell Activation**

- O. M. Chimbola.....1328

**Block Iterative STMV Algorithm and Its Application in Multi-Targets Detection**

- D. Z. Zhu, H. Q. Guo, Y. A. Wei, K. J. Wang.....1346

**Research on Factors of Linear Algebra Learning Effect**

- X. Wang, C. Hu, Y. H. Wang.....1362

**The Lie Group  $SU(2)$  Hopf Fibration and the Fourier Equation**

- A. Mulenda Mbuto, L. Zihindula Biguru, J. Masudi Kalongama, J. Cimbela Kabongo,  
A. Kabasele Yenga-Yenga.....1374

**Radon Risks Assessment with the Covid-19 Lockdown Effects**

- J. Maya, L. L. Mohamadou, S. M. Mbembe, A. A. Likéné, B. A. Mbembe, M. Boubakari.....1402

**Existence and Stability Results for Impulsive Fractional  $q$ -Difference Equation**

- M. Jiang, R. G. Huang.....1413

**Dominant Correlation Effects in Two-Electron Atoms**

- H. Klar.....1424

**Exact Quantized Momentum Eigenvalues and Eigenstates of a General Potential Model**

- M. Farout, A. Bassalat, S. M. Ikhdair.....1434