Table of contents

An everyday strategy analysed via Control Theory 121
Jesús Ildefonso Díaz and Iván Moyano

On the number of fixed points of a Boolean transformation 125
Sergiu Rudeanu

Sharp integral inequalities based on general three-point formula via a generalization of Montgomery identity 132
Josip Pečarić and Mihaela Ribičić Penava

Entropy solution to an elliptic problem with nonlinear boundary conditions 148
Stanislas Ouaro and Arouna Ouedraogo

Uniqueness of strong solution for a 1D viscous bi-layer Shallow Water model 182
Jean De Dieu Zabsonré and Adama Ouedraogo

Analytical approximate solutions of systems of differential-algebraic equations by Laplace homotopy analysis method 191
R. Al-masaeed and H.M. Jaradat

Solving nonlinear fractional differential equation using a multi-step Laplace Adomian decomposition method 200
Mohammad Zurigat

Exact parametric solutions of the nonlinear Riccati ODE as well as of some relative classes of linear second order ODEs of variable coefficients 211
Dimitrios E. Panayotounakos, Theodoros I. Zarmpoutis, Panayotis Sotiropoulos and Anastasios G. Kostogiannis

Statistical Convergence of Triple Sequences on Probabilistic Normed Space 226
Ekrem Savaş and Ayhan Esi

Slant submanifolds of Lorentzian almost contact manifolds 237
Khushwant Singh, Siraj Uddin, S.S. Bhatia and M.A. Khan

Hilbert's integral inequality in whole plane with general homogeneous kernel ... 244
Predrag Vuković

Approximate analytical solutions to the Bagley-Torvik equation by the Fractional Iteration Method 251
Toufik Mekkaoui and Zakia Hammouch

Divisors of order k 257
Nicuşor Minculete

Prime Ideals in BCI and BCK-Algebras 266
R. A. Borzooei and O. Zahiri

Inequalities involving Mellin transform, integral mean, exponential and logarithmic mean 277
A. Aglić Aljinović

Durrmeyer operators of King-type 288
Ovidiu T. Pop, Adrian D. Indrea and Petru I. Braica

Properties of the Closure Operator in Peano Algebras 299
Nicolae Ţăndăreanu and Irina Tudor (Preda)

Optimization of Gear Changing using Simulated Annealing 309
Alexandru P. Becheru and Cătălin Stoean

Running Hadoop applications in virtualization environment 322
Mirel Coşulschi, Mihai Gabroveanu and Adriana Sbîrcea