NUMERICAL SOLUTION OF NONLINEAR FREDHOLM INTEGRO-DIFFERENTIAL EQUATIONS BY CHEBYSHEV WAVELETS

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In this paper, the continues Chebyshev wavelets constructed on the interval [0, 1] are used to solve the high-order nonlinear Fredholm integro-differential equation. The nonlinear part of the integral equation is approximated by Chebyshev wavelets, and the nonlinear integral equation is reduced to a system of nonlinear equations. Numerical examples illustrates the pertinent features of the method.