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NUMERICAL APPROXIMATION OF FRACTIONAL INTEGRO-DIFFERENTIAL EQUATIONS BY AN ITERATIVE DECOMPOSITION METHOD

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Abstract

In this paper, an attempt is made to approximate the solution of linear and nonlinear fractional integro-differential equations, by applying an iterative decomposition method. The approximate solution of each problem is presented as a rapidly convergent series of easily computable terms. Results obtained are compared with known results to illustrate the accuracy and efficiency of our method.