APPROXIMATE SOLUTION OF NONLINEAR FRACTIONAL INTEGRO-DIFFERENTIAL EQUATIONS BY HE'S HOMOTOPY PERTURBATION METHOD AND THE MODIFICATION OF HE'SVARIATIONAL ITERATION METHOD

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ABSTRACT

In this paper, we compare the modification of He's variational iteration method (MVIM), and He's homotopy perturbation method (HPM), in order to obtain the approximate solution of nonlinear fractional integro-differential equations of Volterraand Fredholmintegro-differential equations, we presentsome examples to find out accuracy of the methods.

KEYWORDS: Fractional Integro-Differential Equations, Caputo Derivative, Modification of He'svariationa literation Method, Homotopy Perturbation Method