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## 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