

A Series Solution of Fuzzy Integro-Differential Equation

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Abstract : The hybrid differential equations have a wide range of applications in science and engineering. In this paper, the homotopy analysis method (HAM) is applied to obtain the series solution of the hybrid differential equations. Using the homotopy analysis method, it is possible to find the exact solution or an approximate solution of the problem. Comparisons are made between improved predictor-corrector method, homotopy analysis method and the exact solution. Finally, we illustrate our approach by some numerical example.

Keywords : Fuzzy number, parametric form of a fuzzy number, fuzzy integrodifferential equation, homotopy analysis method

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