

An algorithm for solving the fractional Burgers equations

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Abstract

In this paper, a scheme is developed to study numerical solution of the space- and time fractional Burgers equations with initial conditions by the homotopy perturbation method (HPM). The fractional derivatives are considered in the Caputo sense. The solutions are given in the form of series with easily computable terms. Numerical solutions are calculated for the fractional Burgers equation to show the nature of solution as the fractional derivative parameter is changed.

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