

Application of the Aboodh Iterative Method to Fractional Partial Differential Equations

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Abstract: In this article, we present an iterative transformation method for solving fractional partial differential equations that combines the Aboodh transform and iterative methods. By this iterative transformation method, numerical solutions in the form of series are obtained. When we apply this method to the fractional linear Klein–Gordon equation, we find that it yields the same results, just like the Homotopy perturbation method. The procedures and results of this method for solving the new generalized fractional Hirota–Satsuma coupled KdV equation are given in the paper.

Keywords: Aboodh transform; Iterative method; Fractional differential equation

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