A decomposition method for solving the fractional Davey-Stewartson equations.

Summary: In the present paper, we apply the new iterative method which proposed by Daftardar-Gejji and Jafari to solve fractional Davey-Stewartson equations. The convergence of this method is proved. The results obtained by this method have been compared with the exact solutions and show that proposed method is accuracy and convenience for solving nonlinear fractional differential equations.

MSC:
65M99 Numerical methods for partial differential equations, initial value and time-dependent initial-boundary value problems
35R11 Fractional partial differential equations

Keywords:
iterative method; fractional Davey-Stewartson equation; Caputo fractional derivative

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