

عنوان مقاله:

Constuction of solitary solutions for nonlinear differential-difference equations via Adomain decomposition method

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خلاصه مقاله:

Here, Adomian decomposition method has been used for finding approximate and numerical solutions of nonlinear differential difference equations arising in mathematical physics. Two models of special interest in physics, namely, the Hybrid nonlinear differential difference equation and Relativistic Toda coupled nonlinear differential-difference equation are chosen to illustrate the validity and the great potential of the proposed method. Comparisons are made between the results of the proposed method and exact solutions. The results show that the Adomian Decomposition Method is an attractive method in solving the nonlinear differential difference equations. It is worthwhile to mention that the Adomian decomposition method is also easy to be applied to other nonlinear differential difference equation arising in physics.

کلمات کلیدی:

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