

عنوان مقاله:

Solving Duffing-Van der Pol Oscillator Equations of Fractional Order by an Accurate Technique

محل انتشار:

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خلاصه مقاله:

In this paper, an accurate technique is used to find an approximate solution to the fractional-order Duffing-Van der Pol (DVP, for short) oscillators equation which is reproducing kernel Hilbert space (RKHS, for short) method. The numerical results show that the n-term approximation is a rapidly convergent series representation and they present also the high accuracy and effectiveness of this method. The efficiency of the proposed method has been proved by the theoretical predictions and confirmed by the numerical experiments.

کلمات کلیدی:

Duffing-Van der Pol oscillator Equations of Fractional Order, Method of Reproducing Kernel Hilbert Space, Caputo derivative, Convergence, Numerical Solutions

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