

## عنوان مقاله:

A New Method for Solving Nonlinear Volterra-Hammerstein Integral Equations Via Single-Term Walsh Series

## محل انتشار:

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## خلاصه مقاله:

In this article, the properties of single-term Walsh series are presented and utilized for solving the nonlinear Volterra-Hammerstein integral equations of second kind. The interval  $[0;1)$  is divided to equal subintervals,  $m$  is a positive integer number. The midpoint of each subinterval is chosen as a suitable collocation point. By the method the computations of integral equations reduce into some nonlinear algebraic equations. The method is computationally attractive, and gives a continuous approximate solution. An analysis for the convergence of method is presented. The efficiency and accuracy of the method are demonstrated through illustrative examples. Some comparisons are made with the existing results.

## کلمات کلیدی:

Collocation method, Integral equations, STWS method, Volterra-Hammerstein

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