Numerical Solution of the Rosenau KdV-RLW Equation by Using Collocation Method
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Abstract. In this study, Rosenau KdV-RLW equation is solved numerically by a meshless method based on RBF collocation method. Linear stability analysis is applied to analyze the stability of the proposed method for Rosenau- KdV-RLW equation. Accuracy of the method is discussed by computing the numerical conserved laws, error norms $L_2$ and $L_{\infty}$. Moreover, convergence rate of the solution is investigated. Comparisons are made between the results of this method and some other earlier works.

Keywords. RBF collocation method, Rosenau-KdV equation, Rosenau-RLW equation, Rosenau-KdV-RLW equation.

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References


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