Solution of Modified Equal Width Equation Using Quartic Trigonometric Spline Method

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Abstract. Using a quartic trigonometric B-spline (QTB-S) scheme, the numerical solution is obtained for modified equal width equation (MEW eq.). The approach based on finite difference scheme with the help of Crank-Nicolson formulation. The finite difference scheme is used for time integration and QTB-S function for space integration. Performance and accuracy of the scheme is validated through testing two problems by using conserved laws and L and L2 error norms.

Key word: Quartic trigonometric B-spline (QTB-S), finite difference scheme, modified equal width equation (MEW eq.).