

An Approximate Solution of Schrödinger Equation Using Sine – Cosine Function Method

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ABSTRACT

In this study, we developed a travelling wave solution for nonlinear Schrödinger equations utilising the Sine-Cosine method. A variety of nonlinear partial differential equations, including the Schrödinger-Hirota equation, the Gardner equation, the modified KdV equation, the perturbed Burgers equation, the general Burger's-Fisher equation, and the cubic modified Boussinesq equation, which is a crucial Soliton equation, can be solved precisely using this method.

Keywords: Nonlinear Schrödinger equations, the Sine-Cosine method