

## Mapping Method to Solve a Nonlinear Schrodinger Type Equation

**Authors :** Edamana Vasudevan Krishnan

**Abstract :** This paper studies solitons in optical materials with the help of Mapping Method. Two types of nonlinear media have been investigated, namely, the cubic nonlinearity and the quintic nonlinearity. The soliton solutions, shock wave solutions and singular solutions have been derives with certain constraint conditions.

**Keywords :** solitons, integrability, metamaterials, mapping method

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