

# Application of the Homotopy Perturbation Method to Linear and Nonlinear Schrödinger Equations

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He's homotopy perturbation method (HPM) is applied to linear and nonlinear Schrödinger equations for obtaining exact solutions. The HPM is used for an analytic treatment of these equations. The results reveal that the HPM is very effective, convenient and quite accurate to such types of partial differential equations.

*Key words:* Homotopy Perturbation Method; Variational Iteration Method; Schrödinger Equations.