

Abbasbandy, S.; Babolian, E.; Ashtiani, M.

Numerical solution of the generalized Zakharov equation by homotopy analysis method.
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Summary: The homotopy analysis method (HAM) is applied to obtain approximations to the analytic solution of the generalized Zakharov equation. The HAM contains the auxiliary parameter \hbar , which provides us with a simple way to adjust and control the convergence region of the solution series.

MSC:

65M99 Numerical methods for partial differential equations, initial value and time-dependent initial-boundary value problems Cited in 15 Documents
35Q55 NLS equations (nonlinear Schrödinger equations)

Keywords:

homotopy analysis method; generalized Zakharov equation; solitary-wave solution

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