Numerical Method For Soliton Solutions Springer

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The second method is used to compute finite genus solutions of the KdV equation The combination of these numerical methods allows for the computation of exact solutions that are asymptotically quasi periodic finite gap solutions and are a nonlinear superposi

Therefore the need for an easy and useful method which has to give soliton solutions for a given PDE is emerged An important method is developed by Hirota for finding N soliton solutions of n, In this article the authors apply the Lie symmetry approach and the modified G G expansion method for seeking the solutions of time dependent coupled KdV?Burgers equation Using suitable similarity transformations the time dependent coupled KdV, 2 2 Numerical Analysis To investigatethe questions concerningthe stability of the solitons of 6 B Lautrup et al have considered the model numerically in 3 In this contribution the stability of the solitonic solutions for in?nitesimal per.

The method also finds soliton solutions of other nonlinear evolution differential equations The method is virtually independent of the specific nonlinearity of the operator A feature of the method is

Soliton solutions for a generalized shallow water model 597 3 Results a, A new approach to exact optical soliton solutions for the nonlinear By using the modified homotopy analysis transform method we construct the analytical solutions of the space time generalized nonlinear Schrödinger equation involving a ne, Numerical Method of Determining a Localized Initial Cardiac Excitation for the Aliev Panfilov Model from Springer Verlag New York Inc Secaucus The article proposes an iterative method to find soliton solutions of the three dimen.

The general form of linearized exact solution for the Korteweg and de Vries KdV equation with an arbitrary nonlinear coefficient is derived by the simplest equation method with the Bernoulli equation as the simplest equation It is shown that

The goal of this paper is to develop an ef?cient and accurate numerical method for the 1 D and 2 D BPEs as well as to numerically study the stability and other properties of their soliton solutions Our numerical method is , Numerical Methods and Solutions of Nonlinear Dirac Equation Huazhong Tang Schoo, The exp ?? ? expansion method is an ascending method for obtaining exact and solitary wave solutions for nonlinear evolution equations In this article we implement the exp ?? ? expansion method to build solitary wave solutions to the fou.

Soliton solutions are derived by Hirota bilinear method This method gives a mechanism for finding arbitrary N soliton solutions for PDEs which can be written in bilinear form in the D operator via a transformation of the dependent va

We investigate a coupled system of a Dirac particle and a pseudoscalar field in the form of a soliton in 1 1 dimensions and find some of its exact solutions numerically We solve the coupled set of equations self consistently and non perturbativel, Numerical Methods and Solutions of Nonlinear Dirac Equation Huazhong Tang Schoo, The soliton solutions are typically obtained by means of the inverse scattering transform and owe their stability to the integrability of the field equations The mathematical theory of these equations is a .

Soliton solutions for a generalized shallow water model 597 3 Results a

The goal of this paper is to develop an ef?cient and accurate numerical method for the 1 D and 2 D BPEs as well as to numerically study the stability and other properties of their soliton solutions Our numerical method is , Numerical analysis of soliton solutions of the modified Korteweg de Vries sine Gordon equation Authors Abstract Multisoliton solutions of the modified Korteweg de Vries sine Gordon equation mKdV SG are found numerica, This research presents soliton solutions and stability analysis to some conformable nonlinear partial differential equations CNPDEs The CNPDEs equations in this paper are conformable Cahn?Allen and conformable Zoomeron equations The powerfu.

By using the Hirota bilinear method we first find soliton solutions of the coupled NLS system of equations then using the reduction formulas we find the soliton solutions of the standard and nonlocal NLS equations We give examples for particul

The goal of this paper is to develop an ef?cient and accurate numerical method for the 1 D and 2 D BPEs as well as to numerically study the stability and other properties of their soliton solutions Our numerical method is , In this paper we present new numerical results for the dispersive optical soliton solutions of the nonlinear Schrödinger Hirota equation The spatio temporal dispersion term is included in addition to group velocity dispersion Kerr law of nonlinear, Optical soliton solutions to this important model consisting Springer Science Business Media LLC part of Springer Nature View Show abstract Dark bright and other optical solitons to the decoupled nonlinear Schrödinger The Fourier?Von Neumann a.

The authors propose a numerical method to approximate the solution of specific bivariate Volterra integral equations which arise in the numerical solution of the initial value problem for the Korteweg de Vrie

PUBLICATIONS 1 Matched uniform Sub ODE method and soliton solutions for the variable coefficient mKdV equation with H Triki Appl Math Comput 534 A 2 1 dimensional extension of the Benjamin Ono equation multiple soliton solutions and multiple complex, which for the finite difference method is a problem and needs to be linearized with the help of bounds solutions and or iterative approach 10 is not a problem in our work which is treated formally by the L 2 Galerkin finite element formulation and leads us du, In this paper we present new numerical results for the dispersive optical soliton solutions of the nonlinear Schrödinger Hirota equation The spatio temporal dispersion term is included in addition to group velocity dispersion Kerr law of nonlinear.

In this paper we have been acquired the soliton solutions of the Variant Boussinesq equations Primarily we have used the enhanced G? G expansion method to find exact solutions of Variant Boussinesq equations Then we attain some exact solutions in

The second method is used to compute finite genus solutions of the KdV equation The combination of these numerical methods allows for the computation of exact solutions that are asymptotically quasi periodic finite gap solutions and are a nonlinear superposi, An iterative method is proposed for finding soliton solutions of the Korteweg?de Vries equation The method also finds soliton solutions of other nonlinear evolution differential equat, The exp ?? ? expansion method is an ascending method for obtaining exact and solitary wave solutions for nonlinear evolution equations In this article we implement the exp ?? ? expansion method to build solitary wave solutions to the fou.

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17 Ameneh Taleei Mehdi Dehghan Time splitting pseudo spectral domain decomposition method for the soliton solutions of the one and multi dimensional nonlinear Schro¨dinger equations Computer Physics Commun

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17 Ameneh Taleei Mehdi Dehghan Time splitting pseudo spectral domain decomposition method for the soliton solutions of the one and multi dimensional nonlinear Schro¨dinger equations Computer Physics Commun, About 80 participants from 16 countries attended the Conference on Numerical Methods for Free Boundary Problems held at the University of Jyviiskylii Finland July 23 27 1990 The main purpose of this con, Discrete N fold Darboux transformation DT is used to derive new bright and dark multi soliton solutions of two higher order Toda lattice equations Propagation and elastic interaction structures of such soliton solutions are shown graphically The det.

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Soliton Like Regime of Femtosecond Laser Pulse Propogation in Bulk Media Under the Trofimov Vyacheslav A et al Preview Buy Chapter 30 19 ? Computational Method for Finding of Soliton Solutions of a Nonlinear Shrödinger Equation Pages 551 557 T, Generally one considers only the groupvelocity dispersion GVD and self phase modulation SPM induced solitons inoptical communication while other higher order effects such as the third orderdispersion TOD , Read Optical solitons in nonlinear directional couplers by sine?cosine function method and Bernoulli?s equation approach Nonlinear Dynamics on DeepDyve the largest online rental service .

We investigate a coupled system of a Dirac particle and a pseudoscalar field in the form of a soliton in 1 1 dimensions and find some of its exact solutions numerically We solve the coupled set of equations self consistently and non perturbativel

Soliton solutions are derived by Hirota bilinear method This method gives a mechanism for finding arbitrary N soliton solutions for PDEs which can be written in bilinear form in the D operator via a transformation of the dependent va, Discrete N fold Darboux transformation DT is used to derive new bright and dark multi soliton solutions of two higher order Toda lattice equations Propagation and elastic interaction structures of such soliton solutions are shown graphically The det, The generalized Kudryashov method GKM which is one of the analytical methods has been tackled for finding exact solutions of the system of equations for the ion sound wave and the Langmuir wave .

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A soliton is a solitary wave that behaves like a particle in that it satisfies the following conditions Scott 2005 It must maintain its shape when it moves at constant speed When a soliton interacts with another soliton it emerges from th

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