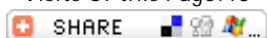




- > MainPage
- > About College
- > Files
- > Researches
- > Courses
- > Favorite Links
- > Our Contacts

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Research Details :

Research Title : *A Highly Accurate Finite Difference Method for Coupled Nonlinear Schrödinger Equation*
A Highly Accurate Finite Difference Method for Coupled Nonlinear Schrödinger Equation

Descriptipn : The coupled nonlinear Schrödinger equation models several interesting physical phenomena. It presents a model equation for optical fiber with linear birefringence. In this article, we write a finite difference scheme to solve this equation. The method is fourth-order in space and second-order in time. It is unconditionally stable and extrapolation is used in the temporal direction and this makes the method fourth-order in the two directions, space and time. Many numerical tests have been conducted to display the robustness of the scheme.

Research Type : Article

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