عنوان مقاله:

Extended rational techniques to resonant nonlinear Schrodinger equation

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خلاصه مقاله:

This paper studies advanced mathematical methods like sin-cos and sinh-cosh approachesto find precise solutions by considering inter-modal dispersion and spatio-temporal dynamics with kerrlaw nonlinearity in the Resonant shrȍdinger equation. These methods are useful for solving nonlinearpartial differential equations. To obtain the ordinary differential equation for the traveling wave solution,we initially deal with the general partial differential equation (PDE). Then, a series of optical solitonsolutions, including cusp and dark solitons, are derived for the Resonant shrȍdinger equation using thiseffective approach.

کلمات کلیدی:

sine-cosine and sinh-cosh methods, solition solution with complex structure, Resonant nonlinear Schrodinger equation, Optics

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