New Families of Soliton and Periodic Solutions of Bose-Einstein Condensation in Linear Magnetic Field and Time-Dependent Laser Field

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Abstract: By using a new generally projective Riccati equation method and with the help of symbolic computation, we consider a nonlinear Gross-Pitaevskii equation with weak bias magnetic and time-dependent laser fields. As a result, some new soliton solutions, rational function solution, and periodic solutions are obtained.

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