

Applications of Elliptic Equation to Nonlinear Coupled Systems

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Abstract: The elliptic equation is taken as a transformation and applied to solve nonlinear coupled systems. It is shown that this method is more powerful to give more kinds of solutions, such as rational solutions, solitary wave solutions, periodic wave solutions and so on, so this method can be taken as a unified method in solving nonlinear coupled systems.

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Key words: elliptic equation, Jacobi elliptic function, nonlinear coupled systems, periodic wave solution

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