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Exact traveling wave solutions of a higher-dimensional nonlinear evolution equation

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Abstract

The exact traveling wave solutions of (4 + 1)-dimensional nonlinear Fokas equation is obtained by using three distinct methods with symbolic computation. The modified tanhcoth method is implemented to obtain single soliton solutions whereas the extended Jacobi elliptic function method is applied to derive doubly periodic wave solutions for this higher-dimensional integrable equation. The Exp-function method gives generalized wave solutions with some free parameters. It is shown that soliton solutions and triangular solutions can be established as the limits of the Jacobi doubly periodic wave solutions. © 2010 World Scientific Publishing Company.

Author Keywords

Exp-function method; Extended Jacobi elliptic function method; Higher-dimensional nonlinear equation; Modified tanhcoth method;
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