

A Generalized F-expansion Method and Its Application in High-Dimensional Nonlinear Evolution Equation

CHEN Jiang,¹ HE Hong-Sheng,¹ and YANG Kong-Qing^{1,2}

¹ Department of Physics, Lanzhou University, Lanzhou 730000, China

² Institute of Applied Physics, Jimei University, Xiamen 361021, China

(Received: 2004-12-13; Revised:)

Abstract: A generalized F-expansion method is introduced and applied to (3+1)-dimensional Kadomstev-Petviashvili (KP) equation. As a result, some new Jacobi elliptic function solutions of the equation are found, from which the trigonometric function solutions and the solitary wave solutions can be obtained. The method can also be extended to other types of nonlinear evolution equations in mathematical physics.

PACS: 05.45.Yv, 02.30.Jr

Key words: F-expansion method, Jacobi elliptic function, KP equation, solitary wave solution, trigonometric function solution

[\[Full text: PDF\]](#)

Close