

Extended F-Expansion Method and Periodic Wave Solutions for Klein-Gordon-Schrödinger Equations

LI Xiao-Yan,¹ LI Xiang-Zheng,¹ and WANG Ming-Liang^{1,2}

¹ Science of College, Henan University of Science and Technology, Luoyang 471003, China

² Department of Mathematics, Lanzhou University, Lanzhou 730000, China

(Received: 2005-4-29; Revised:)

Abstract: We present an extended F-expansion method for finding periodic wave solutions of nonlinear evolution equations in mathematical physics. By using extended F-expansion method, many periodic wave solutions expressed by various Jacobi elliptic functions for the Klein-Gordon-Schrödinger equations are obtained. In the limit cases, the solitary wave solutions and trigonometric function solutions for the equations are also obtained.

PACS: 02.30.Jr, 05.45.Yv

Key words: Klein-Gordon-Schrödinger equations, F-expansion method, periodic wave solutions, Jacobi elliptic functions, solitary wave solutions

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

Close