New Types of Travelling Wave Solutions From (2+1)-Dimensional Davey-Stewartson Equation

ZHAO Hong

School of Physical Science and Information Engineering, Liaocheng University, Liaocheng 252059, China

Abstract: In this paper, based on new auxiliary nonlinear ordinary differential equation with a sixth-degree nonlinear term, we study the (2+1)-dimensional Davey-Stewartson equation and new types of travelling wave solutions are obtained, which include new bell and kink profile solitary wave solutions, triangular periodic wave solutions, and singular solutions. The method used here can be also extended to many other nonlinear partial differential equations.

[Full text: PDF]

Close