A New Class of Periodic Solutions to (2+1)-Dimensional KdV Equations

HUANG Wen-Hua,[1,2,3] LIU Yu-Lu,[2] ZHANG Jie-Fang,[2,3] and LAI Xian-Jing[3]

[1] Department of Physics, College of Science, Huzhou University, Huzhou 313000, China
[2] Shanghai Institute of Applied Mathematics and Mechanics, Shanghai University, Shanghai 200072, China
[3] Institute of Nonlinear Physics, Zhejiang Normal University, Jinhua 321004, China

Abstract: We investigate a new class of periodic solutions to (2+1)-dimensional KdV equations, by both the linear superposition approach and the mapping deformation method. These new periodic solutions are suitable combinations of the periodic solutions to the (2+1)-dimensional KdV equations obtained by means of the Jacobian elliptic function method, but they possess different periods and velocities.

[Full text: PDF]

Close