High-Dimensional Integrable Models with Conformal Invariance

LIN Ji[1,2] and QIAN Xian-Min[1,3]

[1] Physics Department, Shanghai Jiao Tong University, Shanghai 200030, China
[2] Department of Physics, Zhejiang Normal University, Jinghua 321004, China
[3] Physics Department, Shaoxing College of Arts and Sciences, Shaoxing 312000, China
(Received: 2002-12-2; Revised:)

Abstract: Using the (2+1)-dimensional Schwartz derivative, the usual (2+1)-dimensional Schwartz Kadomtsev-Petviashvili (KP) equation is extended to (n+1)-dimensional conformal invariance equation. The extension possesses Painlevé property. Some (3+1)-dimensional examples are given and some single three-dimensional camber soliton and two spatial-plane solitons solutions of a (3+1)-dimensional equation are obtained.

[Full text: PDF]

Close