Exact Solution to (1+1)-Dimensional Higher-Order Schrödinger Equation via an Extended Mapping Approach

ZHU Hai-Ping,[1] ZHENG Chun-Long,[1,2] and FANG Jian-Ping[1]

[1] Department of Physics, Zhejiang Lishui University, Lishui 323000, China
[2] Shanghai Institute of Applied Mathematics and Mechanics, Shanghai University, Shanghai 200072, China
(Received: 2005-5-23; Revised:)

Abstract: Starting from a special variable transformation and with the help of an extended mapping approach, the high-order Schrödinger equation (n=3,4) is solved. A new family of variable separation solutions with arbitrary functions is derived.

[Full text: PDF]

Close