Evolution Properties of the *y*-Periodic Solitons for the (2+1)-Dimensional Boiti-Leon-Pempinelli System

Xiao-Fei Wu[a], Zheng-Yi Ma[a,b], and Jia-Min Zhu[a,b]

[a] College of Information, Zhejiang Lishui University, Zhejiang Lishui 323000, P. R. China
[b] Shanghai Institute of Applied Mathematics and Mechanics, Shanghai University, Shanghai 200072, P. R. China

Reprint requests to Prof. X.-F. W.; E-mail: xfwu66@yahoo.com.cn

With the help of the symbolic computation system Maple and an expanded projective Riccati equation approach, we obtain some new rational explicit solutions with three arbitrary functions for the (2+1)-dimensional Boiti-Leon-Pempinelli system, including Weierstrass function solutions, solitary wave solutions and trigonometric function solutions. From these, several *y*-periodic soliton localized excitations are constructed and some evolution properties of these novel *y*-periodic localized structures are discussed.