

Peakons and stability of the modified μ -Camassa-Holm equation

Changzheng Qu

Department of Mathematics, Ningbo University, Ningbo, 315211, China
email: quchangzheng@nbu.edu.cn

Abstract:

In this talk, we study dynamical stability of periodic peaked solitons for the modified μ -Camassa-Holm equation with the cubic nonlinearity. The equation is a μ -version of the modified Camassa-Holm equation and is integrable with the Lax-pair and bi-Hamiltonian structure. The equation admits the periodic peakons. It is shown that the periodic peakons are dynamically stable under small perturbations in the energy space. This is a joint work with Y. Liu, X.C. Liu and Y. Zhang.

References:

1. C.Z. Qu, X.C. Liu, Y. Liu, Comm. Math. Phys., to appear.
2. Y. Liu, C.Z. Qu, Y. Zhang, Physica D 250 (2013) 66-74.