
Convergence of a Spectral Method for Improved Boussinesq Equation

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Abstract

In [1], Bogolubsky showed that the bad Boussinesq equation is unstable under short wave perturbation and then he proposed that the bad Boussinesq equation could be approximated by the improved Boussinesq (IBq) equation. The IBq equation has been widely studied over the last couple of decades both numerically and analytically. In this study, we proved the convergence of the scheme which is a combination of a spectral and finite difference methods.

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I. L. Bogolubsky , "Some examples of inelastic soliton interaction", Comput. Phys. Commun. 13 , (1977), 149-155.

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