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Solitons and the regularized long wave equation: a nonexistence theorem. (English)

Zbl 1080.35528

Chaos Solitons Fractals 7, No. 11, 1881-1886 (1996).

Summary: We prove that the regularized long wave equation (RLW) has no analytic two-soliton solutions. The proof is based on a superposition algorithm used for constructing multisoliton solutions of the Korteweg-de Vries equation (KdV) and is obtained by analytically continuing the algorithm from the KdV to the RLW.

MSC:

35Q53 KdV equations (Korteweg-de Vries equations)

Cited in 6 Documents

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