

Study on New Doubly-periodic Solutions of two Coupled Nonlinear Wave Equations in Complex and Real Fields

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In this paper, new doubly-periodic solutions in terms of Weierstrass elliptic functions are investigated for the coupled nonlinear Schrödinger equation and systems of two coupled real scalar fields. Solitary wave solutions are also given as simple limits of doubly periodic solutions. – PACS: 03.40.Kf; 02.30Ik

Key words: Nonlinear Wave Equations; Weierstrass Elliptic Function; Doubly-periodic Solution; Solitary Wave Solution; Symbolic Computation.