

## Exotic Localized Coherent Structures of New (2+1)-Dimensional Soliton Equation

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(Received: 2002-4-1; Revised: )

**Abstract:** The variable separation approach is used to obtain localized coherent structures of the new (2+1)-dimensional nonlinear partial differential equation. Applying the Bäcklund transformation and introducing the arbitrary functions of the seed solutions, the abundance of the localized structures of this model are derived. Some special types of solutions solitoff, dromions, dromion lattice, breathers and instantons are discussed by selecting the arbitrary functions appropriately. The breathers may breath in their amplitudes, shapes, distances among the peaks and even the number of the peaks.

PACS: 03.40.Ks, 02.90.+p, 03.65.Sd

**Key words:** variable separation approach, coherent structures, new (2+1)-dimensional soliton equation

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