

## Two BT-VSA Solvable Models

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Abstract: Variable separation approach that is based on Bäcklund transformation (BT-VSA) is extended to solve the (3+1)-dimensional Jimbo-Miwa equation and the (1+1)-dimensional Drinfel'd-Sokolov-Wilson equation. New exact solutions, which include some low-dimensional functions, are obtained. One of the low-dimensional function is arbitrary and another must satisfy a Riccati equation. Some new localized excitations can be derived from (2+1)-dimensional localized excitations and for simplification, we omit those in this letter.

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Key words: Jimbo-Miwa equation, Drinfel'd-Sokolov-Wilson equation, variable separation, Bäcklund transformation, exact solution

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