

# On the Initial Value Problem and Exact Solutions for the Higher-order Broer-Kaup Equations

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The Backlund transformation and exact solutions, especially the closed form of the solution for the initial value problem of the higher order Broer-Kaup (BK) systems in (1+1) and (2+1) dimensions, are obtained by using the extended homogeneous balance method. The method used here is simple and can be generalized to deal with other classes of nonlinear equations.

*Key words:* Higher-order Broer-Kaup Systems in (1+1) and (2+1) Dimensions;  
Extended Homogeneous Balance Method; Backlund Transformation;  
Exact Solutions; Initial Value Problem.