Bäcklund Transformation and Exact Solutions for a New Generalized Zakharov-Kuzentsov Equation with Nonlinear Terms of Any Order

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Abstract: In this paper, with the help of symbolic computation, a new Bäcklund transformation (BT) for a new generalized Zakharov-Kuznetsov equation with nonlinear term of any order, $u_t+au^pu_x+bu^{2p}u_x+\gamma u_{xy}+\delta u_{xxx}+\rho u_{xyy}=0$, is obtained by using the homogeneous balance method. Based on the BT, some exact solutions are presented.

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