

# Bilinear Equations and Bäcklund Transformation for Generalized Ultradiscrete Soliton Solution

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Ultradiscrete soliton equations and Bäcklund transformation for a generalized soliton solution are presented. The equations include the ultradiscrete KdV equation or the ultradiscrete Toda equation in a special case. We also express the solution by the ultradiscrete permanent, which is defined by ultradiscretizing the signature-free determinant, that is, the permanent. Moreover, we discuss a relation between Bäcklund transformations for discrete and ultradiscrete KdV equations.

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