

GRASSMANN EXTENSIONS OF YANG-BAXTER MAPS RELATED TO NLS TYPE EQUATIONS

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In this talk, we present some novel endomorphisms between Grassmann extensions of algebraic varieties which possess the Yang-Baxter property. In particular, we consider the cases of the nonlinear Schrödinger (NLS) equation and the derivative NLS equation, and we make use of their associated Darboux transformations to construct ten-dimensional maps which can be restricted to eight-dimensional Yang-Baxter maps on invariant leaves. These results constitute the first attempt to extend the theory of Yang-Baxter maps in the case of Grassmann algebras.

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