Review: Classification of Quasi-Trigonometric Solutions of the Classical Yang-Baxter Equation

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Pop, Iulia (S-GOTB); Stolin, Alexander (S-GOTB)
Classification of quasi-trigonometric solutions of the classical Yang-Baxter equation.
(English summary)

Let \( g \) be a simple complex finite-dimensional Lie algebra and let \( g[u] \) be the associated polynomial Lie algebra. F. Montaner and E. Zelmanov in [“Bialgebra structures on current Lie algebras”, preprint, Univ. Wisconsin, Madison, WI, 1993; per bibl.] showed that there are four classes of Lie bialgebra structures on \( g[u] \) up to twisting. In the paper under review the authors use this result to give a complete list of the quasi-trigonometric solutions of the classical Yang-Baxter equation. They solve the \( g = o(5) \) case explicitly to illustrate their classification.

{For the entire collection see MR2513523 (2010a:00009)}

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