Deformed Gaudin Models

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Abstract

Classical and quantum interacting spin systems can be constructed using classical r-matrices (Gaudin systems). Some deformations of well-known classical r-matrices are discussed, corresponding spectrum of integrals of motion is found, and eigenvectors are constructed using recurrence algebraic Bethe Ansatz. Properties of creation operators giving connection with Knizhnik–Zamolodchikov equation, are pointed out.