

On the nested Bethe ansatz for a spin chain with simple Lie group symmetry.

We present a new framework for the nested algebraic Bethe ansatz for a closed, rational spin chain with g -symmetry for any simple Lie algebra g . Starting the nesting process by removing a single simple root from g , we use the residual $U(1)$ charge and the block Gauss decomposition of the R -matrix to derive many standard results in the Bethe ansatz, such as the nesting of Yangian algebras, and the AB commutation relation. Based on arXiv:2405.20177.

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