

## One New Method to Obtain the Correlation Length of Solvable Models

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**Abstract:** We propose a new method to obtain the correlation length of gapped XXZ spin 1/2 antiferromagnetic chains. Following the relativistic quantum field theory in (1+1) space-time dimensions, we use the exact dispersion of massive spinon to calculate the correlation length for XXZ spin 1/2 chain. We conjecture that the correlation length for other 1D lattice models can be obtained in the same way. Relation between dispersion and the oscillated correlation of gapped incommensurate lattice models is also discussed.

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Key words: correlation length, dispersion, solvable model

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