

On correlation functions of the XXZ/XYZ open spin chain.

We review recent results concerning the computation of correlation functions in open XXZ and XYZ spin 1/2 chains with boundary fields. In the XXZ case with longitudinal boundary fields, correlation functions at zero temperature can be computed within the algebraic Bethe Ansatz framework in the form of multiple integrals in the half-infinite chain limit. We discuss the extension of this result to two different cases : (1) the temperature case ; (2) the case of more general boundary fields at zero-temperature and the open XYZ case. In the temperature case (1), form factor series for correlation functions can be written within the quantum transfer matrix framework. The case of non-longitudinal boundary fields in open XXZ/XYZ (2) can be considered within the Separation of Variables approach. If the two boundary fields are related by one constraint, we can compute the matrix elements of a set of local operators as multiple integrals, similarly as in the longitudinal case.

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