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The cusp anomalous dimension of ABJM from a Thermodynamic Bethe Ansatz approach

Wednesday 27 September 2023 14:00 (18 minutes)

Since the early days of the AdS/CFT correspondence, integrability has proven to be a powerful tool for the study of the spectral problem in both sides of the duality. A well-known example of this was given ten years ago by a Thermodynamic Bethe Ansatz (TBA) computation of the cusp anomalous dimension of $calN$=4 super Yang-Mills. This result naturally posed the question of whether similar ideas could be applied to other theories with holographic duals. In this talk I will present the results of arXiv:2304.01924, where we studied a TBA-based computation of the cusp anomalous dimension of the ABJM theory. We showed that in ABJM the insertions along a 1/2 BPS Wilson line are described by an integrable open spin chain, and we reproduced the one-loop cusp anomalous dimension of the theory from a Y-system approach.

Summary

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