

Generalized ODE/IM correspondence and its application to N=2 gauge theories

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Abstract

We study the quantum spectral curve of four dimensional N=2 gauge theories in the Nekrasov- Shatashvili limit of the Omega-background. Using the generalized ODE/IM correspondence, we first derive the T-/Y-system and Thermodynamic Bethe Ansatz (TBA) equation for A_n -type Argyres-Douglas theory. Based on the Stokes phenomena of the quantum spectral curve, we then construct functional relation for N=2 gauge theory with SU(2) gauge group. We also compare our functional relation and TBA equation with the ones in the study of BPS spectrum and wall-crossing. This talk is based on the collaboration with Katsushi Ito and arXiv:1707.03596.