Contribution ID: **28** Type: **not specified**

Surprises from the resummation of ladders in the ABJ(M) cusp anomalous dimension

Friday, 20 May 2016 11:10 (20 minutes)

We study the cusp anomalous dimension in N=6 ABJ(M) theory, identifying a scaling limit in which the ladder diagrams dominate. The resummation is encoded into a Bethe-Salpeter equation that is mapped to a Schroedinger problem, exactly solvable due to the surprising supersymmetry of the effective Hamiltonian. In the ABJ case the solution implies the diagonalization of the U(N) and U(M) building blocks, suggesting the existence of two independent cusp anomalous dimensions and an unexpected exponentiation structure for the related Wilson loops. While consistent with previous perturbative analysis, the strong coupling limit of our result does not agree with the string theory computation, emphasizing a difference with the analogous resummation in the N=4 case.

Primary author: Dr PRETI, Michelangelo (Università degli Studi di Parma)

Co-authors: SEMINARA, Domenico (FI); GRIGUOLO, Luca (PR); BONINI, Marisa (PR)

Presenter: Dr PRETI, Michelangelo (Università degli Studi di Parma)

Session Classification: Parallel 20 am