

# Whispers from the Dark Universe - Particles & Fields in the Gravitational Wave Era

CLUSTER OF EXCELLENCE  
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DESY THEORY WORKSHOP

## WHISPERS FROM THE DARK UNIVERSE – PARTICLES & FIELDS IN THE GRAVITATIONAL WAVE ERA

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## Coordinate Bethe Ansatz for $\mathcal{N}=2$ SCFTs

*Wednesday 25 September 2024 15:25 (17 minutes)*

**Abstract:** The study of the spectral problem of planar  $\mathcal{N} = 2$  SCFTs and their corresponding spin chains have been an inauspicious problem. In this talk I want to present a novel approach to the coordinate Bethe Ansatz which allowed the computation of the three-magnon wave function (paper to appear) for the spin chains that capture the spectral problem of the marginally deformed  $\mathbb{Z}_2$  orbifold of  $\mathcal{N} = 4$  SYM in planar limit. The novel idea is the introduction of contact terms which incorporate the dynamical structure of the spin chains and it can be generalized to n-body problem and also to more general orbifolds.

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