Type: Parallel Talk (Theory)

η -Deformation of the AdS5×S5 Pure Spinor Superstring

It is well known that the $AdS_5 \times S^5$ superstring equations of motion either in the Green-Schwarz (GS) or in the pure spinor (PS) formulation can be cast into a zero curvature equation satisfied by a Lax pair.

Recently significant progress has been made in deforming the $AdS_5 \times S^5$ structure of the GS superstring while preserving the integrability and its local symmetries. The η -deformation describes a string moving in a generalized supergravity background, and its main ingredient is a linear operator which solves the modified classical Yang-Baxter equation.

In this work we present an integrable deformation of the $AdS_5 \times S^5$ PS superstring based on homological perturbation theory. The resulting model describes a PS superstring in a η -background. Its equations of motion, Lax connection and BRST symmetry are discussed. We found that the η -deformation of the superstring is produced by the perturbative action of one state in the cohomology of $AdS_5 \times S^5$.

arXiv

https://arxiv.org/abs/1807.10432v1

Authors: Ms BENITEZ, Hector (Universidad de Sao Paulo); Dr RIVELLES, Victor (Universidade de Sao Paulo)

Presenter: Ms BENITEZ, Hector (Universidad de Sao Paulo)

Session Classification: Parallel Talks B

Track Classification: QFT, Strings, AdS/CFT