Exploring the landscape of eta-deformed AdS superstrings

Tuesday 4 June 2019 15:00 (45 minutes)

I will focus on integrable eta deformations of AdS superstrings with the deformation encoded in an operator R satisfying the modified classical Yang-Baxter deformation. Such R-matrices include those of Drinfel'd-Jimbo type, whose action is dictated by the choice of Dynkin diagram and associated Cartan-Weyl basis. Superalgebras admit inequivalent Dynkin diagrams and thus allow for different deformations. Focussing on the AdS2xS2xT6 case, I will present all possible backgrounds and show that only the R-matrix associated with the fermionic Dynkin diagram is unimodular, giving rise to a supergravity background. While this resolves one of the main puzzles of eta-deformed superstrings, others remain including the behavior in the maximal deformation limit. Extending to the bi-Yang-Baxter deformation of the AdS3xS3xT4 superstring I will show how, in this case, the maximal deformation limit can be related to the mirror model.

Presenter: SEIBOLD, Fiona (ETH Zurich)

Session Classification: Seminar