Contribution ID: **10**   Type: **Long talk (20 mins)**

Pure Spinor Super Yang Mills at \alpha'^3

Friday, 16 December 2022 09:40 (30 minutes)

In this talk I will present the toolbox used in Pure Spinor Super Yang-Mills in 10 dimensions. The Pure Spinor formalism greatly simplifies the computation of string scattering amplitudes and by extension, the calculation of amplitudes in the SYM theory. In the talk I will briefly introduce the fundamentals of Pure Spinor superstring theory and its related BRST operator, which is fundamental to the simplicity of the formalism. After I introduce the Non-Linear field equations and their perturbiner solutions and discuss n-point tree-level amplitudes in the theory. I will present some new results on \alpha' deformations to SYM using the surprisingly simple Pure Spinor BRST operator. Finding these deformations becomes a question of finding operators within the BRST cohomology, something that is easily automated.

Type of presentation

20 minute talk

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Strings

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