

QCD form factors from large N chiral algebras

Tuesday 16 July 2024 14:20 (40 minutes)

The collinear singularities of form factors in certain self-dual QCDs determine an abstract chiral algebra. In this talk I will realize an example concretely as the large N limit of an algebra of operators living on a 2d holomorphic surface defect. The construction goes via twisted holography for the type I topological string on a Calabi-Yau 5-fold related to twistor space. I will explain how this realization can be exploited to compute QCD form factors in flat space, and helicity amplitudes on a range of self-dual backgrounds. This is joint work with Kevin Costello and Keyou Zeng.

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