Contribution ID: **18**   Type: **not specified**

Holographic correlators beyond maximal supersymmetry

Friday 20 December 2024 09:30 (45 minutes)

I will summarize an example of the AdS/CFT correspondence between a 4d N=1 SCFT arising as a mass deformation of the N=4 SYM theory and an AdS_5 flux background of type IIB string theory. The SCFT does not admit a weakly coupled description which makes the calculation of its correlation functions challenging. I will explain how one can leverage the bulk gravitational description, in conjunction with new advances in Exceptional Field Theory and consistent truncations in supergravity, to explicitly calculate two- and three-point correlation functions of BPS and non-BPS operators in the planar limit of the SCFT. I will also discuss how these gravitational results agree nicely with calculations of the superconformal index as well as superconformal Ward identities in the 4d N=1 SCFT.

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