Title: Comments on Soft Algebras from All-Plus Gluon Amplitudes

Speakers: Sruthi Narayanan

Series: Quantum Fields and Strings

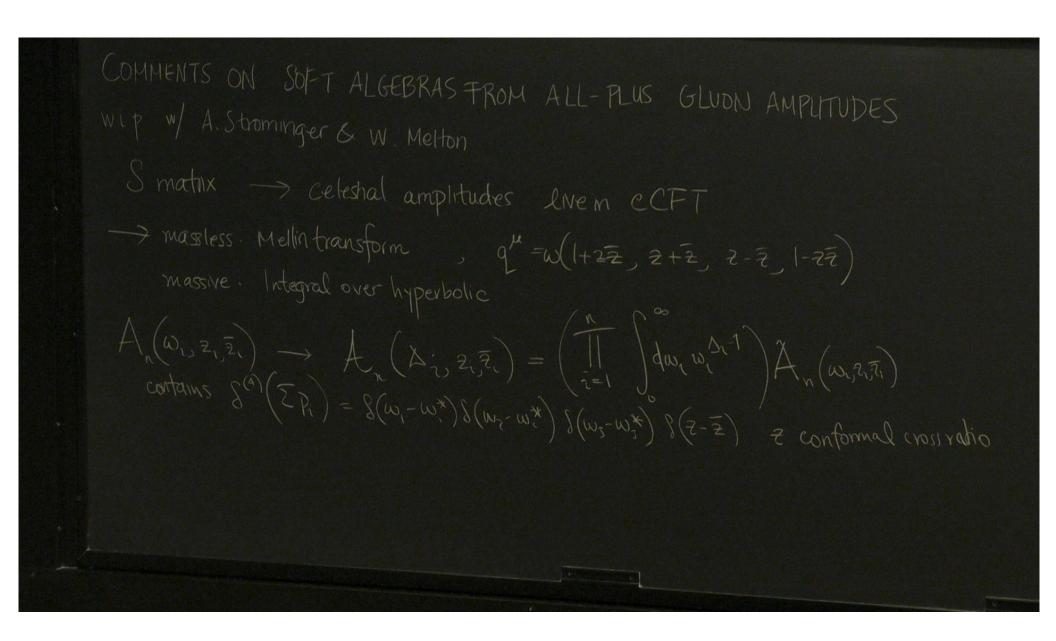
Date: November 01, 2022 - 2:00 PM

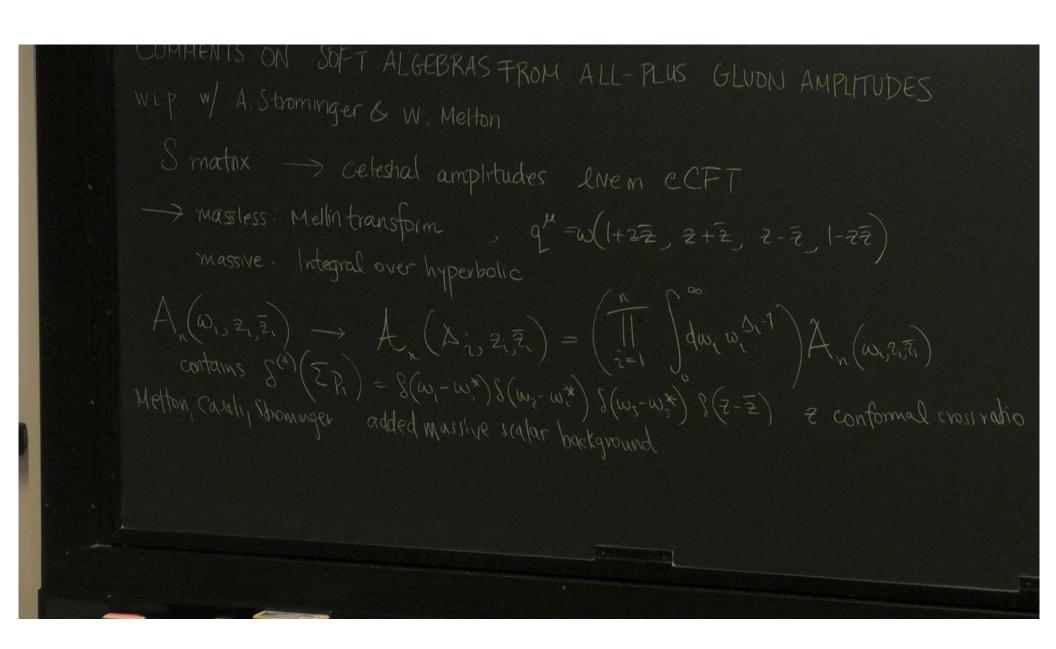
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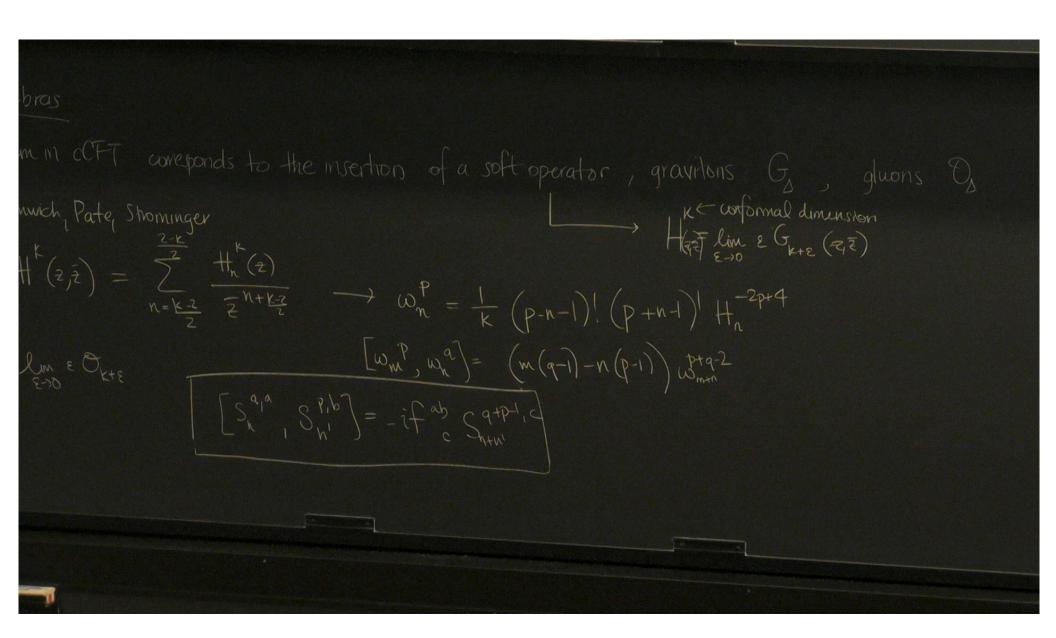
Abstract: Celestial holography posits a duality between a theory of quantum gravity in asymptotically flat spacetime and a "celestial" conformal field theory that lives on its co-dimension two boundary. By studying soft theorems of scattering amplitudes in the bulk it was shown that there exist infinite towers of corresponding soft currents in cCFT and their algebra was calculated. In this talk I will consider a bulk theory of Yang-Mills coupled to a massive scalar and show, via soft limits, that the corresponding boundary algebra admits a level proportional to the strength of the background. I will comment on some other aspects of this deformation as well as potentially important subtleties we have encountered with our method of computing celestial amplitudes.

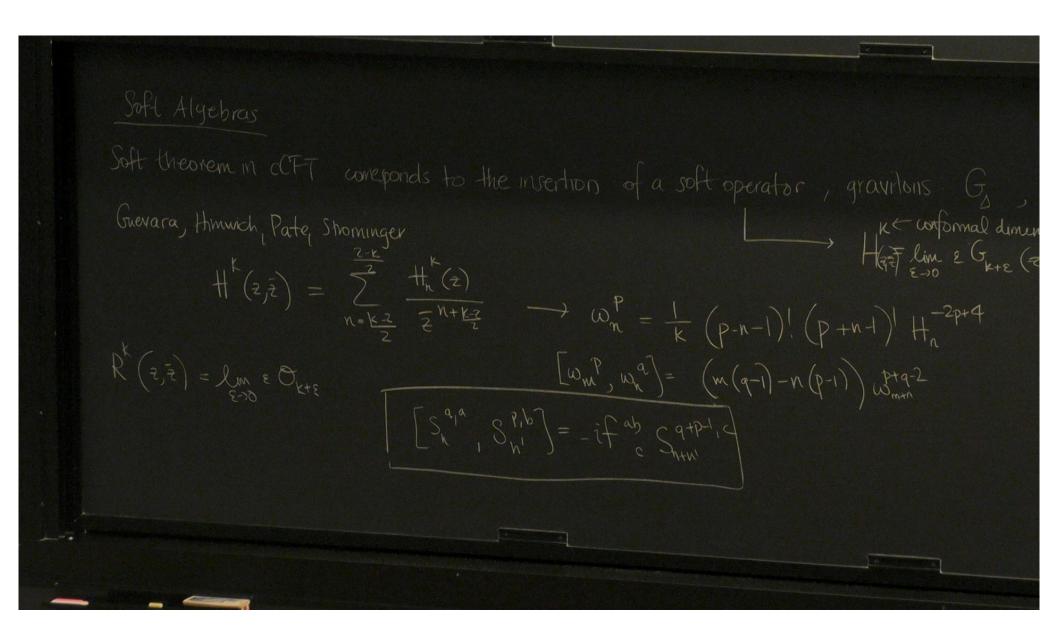
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