Contribution ID: **21** Type: **Talk**

On Graviton non-Gaussianities in the Effective Field Theory of Inflation

Monday 9 January 2023 11:30 (25 minutes)

In cosmology we measure correlation functions (cosmological correlators) which we can trace back to the boundary at the end of inflation. In the spirit of the S-matrix in flat space and holography in AdS, the cosmological bootstrap allows us to compute these boundary observables by sidestepping cumbersome Lagrangians, and instead using dS isometries and fundamental principles with no explicit reference to time evolution, i.e. "bootstrapping time". Recently, progress has been made on bootstrapping correlators in the case where dS boosts are broken, to make more phenomenologically relevant observational predictions. In this talk I will explain how we can use locality and unitarity to bootstrap the graviton three-point function within the Effective Field Theory of Inflation (EFToI). I will first present the full class of operators that contribute to the on-shell two- and three-point functions of gravitons, and show how our analysis also captures graviton bispectra with a perturbative correction to the graviton two-point function.
Based on:
https://link.springer.com/article/10.1007/JHEP10(2022)154

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Session Classification: Talks