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Bootstrapping Inflationary Correlators

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The central idea of the bootstrap approach is to constrain observables directly from consistency conditions, eschewing the complexity of the Lagrangian formalism. In this talk, I will adopt this viewpoint and discuss how the structure of correlation functions in inflation is controlled by (approximate) conformal symmetry and singularities, focusing on three- and four-point functions at tree level. In particular, I will describe classes of differential operators that shift the masses and spins of external/internal particles, allowing general inflationary correlators to be written in terms of a few seed functions. I will also highlight spectroscopic signatures encoded in these correlators, which can be searched for in future cosmological observations.

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