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JOHANNES GUTENBERG UNIVERSITÄT MAINZ

Theorie-Palaver

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Lorentz room (Staudingerweg 7, 5th floor)

Andrea Sanfilippo
TU München

Effective field theory in de Sitter space and the Method of Regions

The description of light and massless scalar fields in an inflationary spacetime is of phenomenological interest, as they provide compelling candidates for the inflaton field. During most of the inflationary epoch, the spacetime can be approximated by the de Sitter spacetime, and the observables of interest are in-in correlation functions of fields in de Sitter space, evaluated at late times. However, the computation of these quantities is challenging, particularly when loop corrections are taken into account. In this talk, I will discuss the recently proposed Soft de Sitter Effective Theory (SdSET) as an avenue to address these difficulties. I will then show how the Method of Regions can be used as a powerful tool to construct the late-time expansion of in-in correlators, as well as to gain further insight into the structure of SdSET.

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