

Department of Theoretical Physics



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An information theory based search for the scale of cosmic homogeneity

Wednesday, 13 January 2016, 10:00

Room A304

The assumption that the Universe is statistically homogeneous on sufficiently large scales is one of the fundamental pillars of modern cosmology. In this talk I will discuss an information theory based new method for testing the assumption of cosmic homogeneity. We have applied this method on the main galaxy sample and the luminous red galaxy (LRG) sample of the Sloan Digital Sky Survey (SDSS). I will present the results from our studies as well as discuss the results obtained so far from various galaxy surveys by using the traditional number count based methods and the multifractal analysis. Finally I will present our conclusion on this issue and point out some important caveats associated with all the number count based methods used for the study of cosmic homogeneity.



Subha Majumdar

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