

Seminarium Studium Doktoranckiego NCBJ
Thursday, 19 December, 9:00
Sala 404 w NCBJ, Pasteura 7

Speaker:
Alice Boldrin (Studium Doktoranckie NCBJ)

Title:

CMB-lensing in an anisotropic Universe

Abstract:

In recent times, the unprecedented sensibility of the cosmological surveys has allowed us to study the Cosmic Microwave Background (CMB) in great detail. In particular, the present major sources of information are given by the CMB anisotropies spectra. Therefore, the secondary effects on such CMB anisotropies have to be calculated with always better precision to compare theory with observation. For this reason, new physical phenomena like the lensing at next-to-leading order, which were previously neglected because of the insufficient sensitivity of the experiments, must now be taken into account. In this talk I consider how the presence of lensing in an anisotropic Universe modifies the temperature anisotropies of the CMB. In this framework I consider the Bianchi I space-time, which describes a homogeneous but anisotropic Universe. As a mathematical tool I use the Geodesic Light-Cone (GLC) coordinates, which are a physical set of coordinates that allows for an easier description of an anisotropic space-time.