UNIVERSITY OF CRETE
DEPARTMENT OF PHYSICS

CCN CRETE CENTER FOR QUANTUM COMPLEXITY AND NANOTECHNOLOGY

ΓΕΝΙΚΟ ΣΕΜΙΝΑΡΙΟ ΤΜΗΜΑΤΟΣ ΦΥΣΙΚΗΣ

PHYSICS COLLOQUIUM

Thursday, 21 May 2015

17:00 -18:00

3rd Floor Seminar Room

"Gravitational waves from inflation: the good, the bad and the ugly"

Prof. Subir Sarkar

University of Oxford, UK

Abstract

The detection by the BICEP2 telescope at the South Pole of a 'B-mode polarisation' signal in the cosmic microwave background was widely hailed as the first direct evidence that the early universe underwent a period of inflation, during which gravitational waves were generated with an amplitude of 20% of the scalar density fluctuations. Subsequently data from the Planck satellite has shown that the signal can be attributed to emission from dust in our Galaxy. We had in fact pointed out earlier that there is significant foreground contamination of CMB maps even at such high galactic latitudes. This is of paramount importance for many ongoing and proposed ground-based experiments which are seeking to detect gravitational waves from inflation. I will review the issue and possible ways forward.