

Application of the eigenfunctions of the Dirac operator on spheres to de Sitter QFT

Wednesday, 18 December 2019 17:00 (30 minutes)

Studying field theory in de Sitter spacetime is important because of its relevance to inflationary cosmology. N -dimensional de Sitter space can be obtained by analytic continuation of the N -sphere. In this talk, I will discuss how one can construct spinor fields in de Sitter spacetime by analytically continuing the eigenfunctions of the Dirac operator on the N -dimensional sphere. Furthermore, I will explain how to obtain mode expansions for the free Dirac field operator and discuss how these modes are connected with unitary $SO(N,1)$ representations.

Primary author: Mr LETSIOS, Vasileios (speaker and author)

Presenter: Mr LETSIOS, Vasileios (speaker and author)

Session Classification: Parallel Session 2