De *Madrid* al *Cosmos*

Fast oscillating fields cosmology

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Abstract: The ubiquity of scalar fields in cosmology is not only owed to its simplicity, but mainly because it intrinsically respects the large degree of isotropy observed in the universe. On the contrary, the evolution of a coherent vector field is clearly anisotropic. However, we will show that the energy-momentum tensor of homogeneous fields of arbitrary spin in an expanding universe is always isotropic in average provided the fields remain bounded and evolve rapidly compared to the rate of expansion. This property enlarge the plausible candidates to solve cosmological problems to higher spin theories.

In the second part of the talk we will discuss the perturbations of a fast oscillating scalar field under a power law potential, following an effective approach as well as the exact system solution in the sub/super-Hubble limits.

Lunes 08 de febrero, 16:00 h.
Sala de Conferencias
CFMAC - CSIC (Serrano, 121)

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