

SEMINARIO
Departamentos de Física Teórica I y II
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TITULO: Covariant gauge invariant perturbations in multifluid fourth order gravity

LUGAR: FACULTAD DE CIENCIAS FÍSICAS UCM

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ABSTRACT

In the last years, the evolution of scalar cosmological perturbations has drawn a lot of attention mainly due to its power to discriminate between different competing gravitational theories. Extending previous works, we give a complete set of equations describing the evolution of matter and curvature fluctuations for a multi-fluid cosmological medium by using the 1+3 covariant gauge for modified gravity theories. We then specialize to a radiation-dust fluid described by barotropic equations of state. In particular we will show exact solutions for scales much smaller and much larger and how constraints can be imposed in order to have a growth rate compatible with the Méészáros effect.