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Seminar of the theory group of APC

Mardi 16 Octobre 2018, 14 :00
APC, 646 A - Mondrian
Domaines : hep-th

Titre : *Inflation beyond GR*

Orateur : **Hector Ramirez (University of Valencia)**

Résumé : *Scalar-tensor theories of gravity have become a very rich framework from which one can construct viable phenomenological models of early- and late-time cosmology. In particular for inflation, previous models constructed using the Horndeski Lagrangian give predictions which are now in tension with CMB data. On the other hand, by trying to fit the observations, one would find instabilities at the level of the quantum perturbations. Furthermore, computing the standard inflationary observables in a semi-analytical way is a nontrivial task. In this talk, first I will introduce a novel scalar-vector-tensor framework (SVT) from which Horndeski is a subclass theory. I will show a simple inflationary model using the SVT Lagrangian and, then, using the standard G-inflation parametrization, a new mechanism to avoid instabilities with a phenomenological model which fits CMB predictions, this by computing observables using the Generalized and Optimized Slow-Roll techniques.*