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Seminar of the theory group of APC

Mardi 23 Janvier 2018, 14 :00
APC, 483 A - Malevitch
Domaines : hep-th

Titre : *The EFT of Dark Energy and the EFT of Large-Scale Structure*

Orateur : **Matthew Lewandowski (IPhT)**

Résumé : *In the next few years, we are going to probe the low-redshift universe with unprecedented accuracy. Among the various fruits that this will bear, it will greatly improve our knowledge of the dynamics of dark energy. A particularly useful description of dark energy is through the Effective Field Theory of Dark Energy, which assumes that dark energy is the Goldstone boson of broken time translations. Such a formalism makes it easy to ensure that predicted signatures are consistent with well-established principles of physics. Since most of the information resides at high wavenumbers, it is important to be able to make predictions at the highest wavenumber that is possible. The Effective Field Theory of Large-Scale Structure (EFTofLSS) is a theoretical framework that has allowed us to make accurate predictions in the mildly non-linear regime. In this talk, I will discuss both the EFTofLSS and the EFTofDE, including the extension of the EFTofLSS to include the non- linear effects of Horndeski-type dark energy in the quasi-static limit.*