SEMPARIS – Séminaires en région parisienne

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Seminar of the theory group of APC

Mardi 4 Novembre 2014, 14 :00
APC, 483A Malevitch
Domaines : hep-th

Titre : *Infrared dynamics in de Sitter space-time : The resummation of non-local logarithms*

Orateur : **Florian Gautier (Technische Universität Munchen (TUM))**

Résumé : *Thanks to the succes of the inflationnary paradigm, a lot of effort has been put in the computation of radiative corrections in Friedmann-Lemaître-Robertson-Walker space-times. The latter corrections typically exhibit infrared divergences for light fields in units of the Hubble rate, calling for resummation. In this talk, we will restrict ourselves to de Sitter space-time and study the two point function of an O(N) scalar field. We will explain how to find exact analytical solutions of the Schwinger- Dyson equation, at two loop order and at next-to-leading order in a 1/N expansion, for super horizon momenta of the two-point function of a scalar field with quartic self-coupling. We will then show that the infinite series of self-energy insertions generates a rich, but infrared-regular, structure of the propagator.*