SEMPARIS – Séminaires en région parisienne

http ://string.lpthe.jussieu.fr/semparis/

Particle Physics at LPTHE

Mardi 7 Novembre 2017, 11 :00
LPTHE, Library
Domaines : hep-th

Titre : *Effective field theory approach to classical and quantum gravity*

Orateur : **Pierre Vanhove (IPhT)**

Résumé : *In this talk we will present an effective field theory approach to various problems in gravitational physics. By computing scattering amplitudes in quantum gravity we derive long-range classical and quantum contributions to the gravitational bound state of two bodies. We explain how modern amplitude techniques enable much simplified computations. We describe how classical general gravity emerges from quantum loop. Using an eikonal procedure we extract post-Newtonian general relativity correction as well as long range quantum corrections. We will explain why these quantum effects are universal to any quantum gravity and independent of the high-energy completion.*
