# SEMPARIS – Séminaires en région parisienne

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## Seminar of the theory group of APC

**Mardi 7 Octobre 2014, 14 :00**
APC, 483A Malevitch
Domaines : hep-th

Titre : *Partially Massless Gravity and some No-Go results*

Orateur : **Wenliang Li ( APC )**

Résumé : *Partially massless (PM) spin-two field has attracted a lot of attention in recent years because of its potential to resolve the cosmological constant problem. In partially massless gravity, the value of cosmological constant is linked to that of the graviton mass, which is technically natural to be small due to the enhanced diffeomorphism symmetry protection in the massless limit.*

*In the first part of this seminar, we will explain the concept of Partially-Massless and PM gauge symmetry at the linearised level. They appear in the contexts of higher spin field theory and conformal gravity as well. Then we will briefly review the theories of ghost-free massive gravity ( dRGT theory, its bimetric extension ) and their partially massless limits as candidates for a non-linear theory of partially massless gravity.*

*In the second part of the seminar, we will present a general setting that covers all the candidates above. By analysing the consequences of gauge symmetry, we will derive the no-go results presented in our recent paper [ Phys.Rev.Lett. 113 (2014) 091101, arXiv :1406.2335v2 ].*