

## SEMPARIS – Séminaires en région parisienne

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### Séminaire de matrices, cordes et géométries aléatoires

**Mercredi 17 Janvier 2018, 14 :15**  
IPHT, Salle Claude Itzykson, Bât. 774  
Domaines : hep-th

Titre : *Testing gravity with black holes and gravitational waves*

Orateur : **Helvi Witek ( King's College )**

Résumé : *The breakthrough discovery of gravitational waves has given us a new sense to probe and test gravity in its most extreme, strong-field regime. Although General Relativity (GR), our standard model of gravity, seems to have passed this new stress-test, many questions concerning, e.g., a unifying theory of quantum gravity or the constituents of dark matter have remained open. Candidate models aiming at resolving these issues typically involve couplings to additional fields or extensions to GR. In this talk I will give a brief overview over the most promising extensions of GR and how we can search for them in the era of black hole and gravitational wave observations.*

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