

EHQG-KMI-Theory Seminar

Title : Modified theories of gravity and
mechanisms of mass screening

Speaker : Professor Radouane Gannouji
(Tokyo University of Science)

Date/Time : Tuesday, October 2, 2012
5:00 P.M.

Place : Lecture Room 9 (ES034)
(The 3rd floor in the ES building)

Abstract :

Despite the overwhelming evidence for the existence of an acceleration of the Universe, the underlying fundamental physics remains unknown. As an alternative to cosmological constant, the cosmic acceleration can result from large scale modification of gravity which necessarily include additional degrees of freedom. If these additional degrees are welcomed at large scales they should be screened at small scales where General Relativity is a perfect theory. During this talk, I will present the 3 screening mechanisms known in the literature: chameleon, symmetron and Vainshtein mechanisms. I will show the strengths and weaknesses of these models.