Prof. Marc Henneaux (Université Libre de Bruxelles and International Solvay Institutes Brussels) "Infinite-Dimensional Symmetries: The Key to Understanding Gravity?"

TIME:
11 Mar 2009, 14:00 - 15:00

LOCATION:
AEI, Am Mühlenberg 1, 14476 Potsdam-Golm, Central Building, Lecture Hall

(Living Reviews in Relativity Anniversary Lecture)

It is well known that the description of the non-gravitational interactions (electromagnetism, weak and strong nuclear forces) relies on finite-dimensional Lie groups and algebras (e.g., SU(3)X SU(2)X U(1)). Recently, it has been argued by many research teams that the description of
the gravitational interaction should involve infinite-dimensional Lie algebras of hyperbolic Kac-Moody type, such as E(10). The talk will provide
a brief, pedagogical introduction to these mathematical structures and present some of the evidence for their relevance to gravity.

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