ASC-PhD-Colloquium

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Gravity on Noncommutative Spaces

This talk starts with an introduction to the basic ideas underlying the construction of physical theories on Noncommutative Spaces. The concepts of Deformed Spaces and Deformed Symmetries will be explained. Then an algebraic construction of a gravity theory on Noncommutative Spaces is presented. Based on deformed diffeomorphisms a Noncommutative Geometry is established. This leads to a deformed Einstein-Hilbert action, which is invariant with respect to deformed coordinate transformations. In lowest order of the deformation parameter the usual Einstein-Hilbert action is reproduced. The metric or the vierbein will be the dynamical variable as in the undeformed theory. Some generalizations as well as deformed Gauge-Field theories will also be discussed.

Monday, 25th September 06, 17.15 h , Room 449, Theresienstr. 37 / IV

Prof. D. Lüst