LMU LUDWIG-MAXIMILIANS-UNIVERSITÄT MÜNCHEN

ARNOLD SOMMERFELD CENTER FOR THEORETICAL PHYSICS

Arnold Sommerfeld Lecture Series

Professor Hermann Nicolai

MPI for Gravitational Physics, Golm

Sommerfeld Theory Colloquium:

The Hyperbolic Algebra E10 - Searching for a Fundamental Symmetry of Physics

Symmetries play a key role in modern physics: both the Standard Model of particle physics and Einstein's theory of General Relativity are largely determined by symmetry principles. Recent investigations of spacelike (cosmological) singularities in General Relativity, following the classic work of Belinski, Khalatnikov and Lifshitz, have revealed intriguing hints that the maximally extended hyperbolic Kac-Moody algebra E10 not only unifies many of the duality symmetries of relevance in string theory, but may provide a concrete framework for explaining the emergence of space and time from a pre-geometrical theory of quantum gravity.

Wednesday, 30th June 2010, 10:30 h, Room 348 / 349, Theresienstr. 37, LMU

Prof. D. Lüst