SFB-Seminar

ZEIT:
29.11.2011, 16:00 Uhr - 19:00 Uhr

ORT:
Konrad-Zuse-Zentrum für Informationstechnik Berlin
Takustr. 7
14195 Berlin-Dahlem

PROGRAMM:

16:00 - 17:00 **Prof. Dr. Hermann Nicolai**

Modular realizations of hyperbolic Weyl groups
For hyperbolic Kac--Moody algebras of ranks 3,4,6 and 10, the associated Weyl groups can be realized as generalized modular groups over the four normed division algebras. The corresponding modular transformations can be realized on generalized upper half planes, in analogy with the Moebius action of SL(2,Z) on the usual complex upper half plane. In this talk I review this construction, with particular attention to the maximal rank case (octonions), and -- time permitting -- explain the possible relevance of the associated automorphic functions for mini-superspace models of quantum gravity.

17:00 - 17:30 Kaffeepause

17:30 - 18:30 **Prof. Dr. Niklas Beisert**

On Null Polygonal Wilson Loops in Superspace
Null polygonal Wilson loops in N=4 supersymmetric Yang-Mills theory (SYM) have been shown to be dual to scattering amplitudes in the same theory. This intriguing relationship has led to substantial progress in computing both sets of observables, and it is deeply connected to planar integrability of the model. In this talk I will discuss the geometry of null polygons in N=4 superspace using

Kontakt:
Humboldt-Universität zu Berlin . Institut für Mathematik
SFB 647 . Unter den Linden 6 . 10099 Berlin
Tel. +49 30 2093 1804 . Fax. +49 30 2093 2727
sfb647@math.hu-berlin.de

twistor space and a calculation of the corresponding Wilson loop expectation value.

Kontakt:
Humboldt-Universität zu Berlin . Institut für Mathematik
SFB 647 . Unter den Linden 6 . 10099 Berlin
Tel. +49 30 2093 1804 . Fax. +49 30 2093 2727
sfb647@math.hu-berlin.de