SFB Colloquium (Research Project C2)

TIME:
29 Oct 2013

LOCATION:
Humboldt-Universität zu Berlin
Institut für Mathematik und Institut für Physik
AG Mathematische Physik von Raum, Zeit und Materie
IRIS-Gebäude; Vortragsraum 2.07
Zum Großen Windkanal 6
12489 Berlin

PROGRAM:

15:00 - 16:00 **Prof. Dr. Andreas Juhl (HU)**

The ambient metric and conformal invariants
In the first part of this lecture, I will give an introduction to the construction of the Fefferman-Graham ambient metric. Then I will describe two of its applications: the general description of scalar conformal invariants and the identification of conformal invariants arising from GJMS-operators.

16:00 - 16:30 Coffee Break

16:30 - 17:30 **PD Dr. Johanna Erdmenger (MPI für Physik, München)**

Applications of gauge/gravity duality
Gauge/gravity duality is a new concept within theoretical physics which conjectures a map between a gravity theory on a hyperbolic space and
a quantum field theory at its boundary. The Fefferman-Graham ambient metric construction plays an important role in substantiating this claim, in particular through the `holographic renormalization' approach. In the talk PD Dr. Johanna Erdmenger will explain these

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concepts and give a recent application example, consisting of a gauge/gravity duality model for the Kondo effect, a model of central importance within quantum field theory.

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