



## SFB Seminartag

### ZEIT:

12.11.2007, 15:00 Uhr - 18:00 Uhr

### ORT:

HU-Berlin  
Invalidenstraße 42  
Nordbau, Hörsaal 8  
10115 Berlin

### PROGRAMM:

15:00 - 16:00 **Prof. Gavril Farkas**

#### **The enumerative geometry of the moduli space of curves**

The moduli space  $M_g$  of Riemann surfaces of genus  $g$  is a central object in mathematics. In the last two decades we have witnessed major advances in understanding its geometry using ideas from algebraic geometry, topology and physics. I will discuss problems related to the cohomology of  $M_g$  (Witten's conjecture on intersection numbers inspired by two dimensional gravity, Faber's conjecture on the tautological ring of the moduli space) as well as a few question concerning the global nature of  $M_g$  as an algebraic variety.

16:00 - 16:30 Kaffeepause

16:30 - 17:30 **Dr. Harald Dorn**

#### **Conformal anomalies and double trace deformations in AdS/CFT**

We start with a sketch of some basic facts concerning conformal anomalies in quantum field theories as well as their holographic description

### 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

[www.raumzeitmaterie.de](http://www.raumzeitmaterie.de)

within  
the AdS/CFT correspondence. The second part of the talk will  
describe own  
work on the next leading large  $N$  contribution to the anomaly in  
conformal  
theories at the two endpoints of a renormalization group flow  
triggered  
by a double trace deformation. We show the exact equality between  
the  
dimensionally regularized partition functions involved on both sides of  
the correspondence.

**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

[www.raumzeitmaterie.de](http://www.raumzeitmaterie.de)