



## SFB-Seminar "Geometric Structures, PDEs, Moduli Spaces and String Theory" (Teilprojekt C3) und Vollversammlung

### ZEIT:

2.2.2016, 15:00 Uhr - 18:00 Uhr

### ORT:

### PROGRAMM:

15:00 - 15:30 SFB-Vollversammlung

15:30 - 16:30 **Dr. Bjorn Andreas (FU)**

#### **On physical conditions which impose precise mathematical problems**

Consistency conditions (such as the cancellation of gauge and gravitational anomalies) in string theory lead to precise mathematical problems and conjectures. In this talk I will review some of these problems from a physical and mathematical perspective and report on recent progress toward a solution.

16:30 - 17:00 Kaffeepause

17:00 - 18:00 **Dr. Mario Garcia Fernandez (Instituto de Ciencias Matematicas)**

#### **Differential Geometry in the Strominger System Problem**

The Strominger system of partial differential equations provides a natural generalization of the Calabi problem on Calabi-Yau manifolds (complex, with trivial canonical bundle) which are not necessarily Kählerian. In this talk I will overview some results concerning the existence and moduli problem for the Strominger system. I will start with the proof of a general existence theorem for the PDE problem in the case that the Calabi-Yau manifold is Kählerian. I will continue with an overview of recent progress on the moduli problem for the

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Strominger system.

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