



## SFB Seminartag

**ZEIT:**

21.6.2005, 15:00 Uhr - 18:00 Uhr

**ORT:**

Hörsaal ZIB  
Takustraße 7  
14195 Berlin-Dahlem

**PROGRAMM:**

15:00 - 16:00 **Prof. Dr. Gerhard Huisken (AEI)**

### **Geometrische Evolutionsgleichungen: Fragestellungen und Querverbindungen**

16:00 - 16:30 Kaffeepause

16:30 - 17:30 **Prof. Dr. Helga Baum**

### **Holonomy of conformal structures, special conformal geometries and conform-parallel spinors**

The holonomy theory of semi-Riemannian manifolds is well-known. Special metric holonomies are related to distinguished geometric structures (such as Kähler, Calabi-Yau, G<sub>2</sub>,...) and allow us to decide how many parallel spinors exist. In the seminar I will discuss the same question in conformal geometry. In the first part I will introduce some basics of conformal Cartan geometry which are necessary to define the notion of conformal holonomy. In the second part I will review recent results on the holonomy of Riemannian and of Lorentzian conformal structures. I will explain geometric properties of conformal structure with special holonomy, in particular the relation to Einstein manifolds and to the existence of conform-parallel spinors.

**Kontakt:**

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