Wintersemester 2015/16

**Oberseminar
Geometrische Analysis und Mathematische Relativitätstheorie**

Am Donnerstag, den **04.02.2016** spricht um **16 Uhr c. t.** im Raum N14

Prof. Dr. Esther Cabezas-Rivas
(Goethe-Universität Frankfurt)

über das Thema

Almost non-negative curvature, what's new?

We will review some classical problems in Differential Geometry, which lead us to work with manifolds with almost non-negative curvature. In particular, we will explain during the talk why it is natural to wonder weather for these manifolds a topological invariant called Â-genus vanishes (this question was proposed by John Lott in 1997). We will provide a positive answer by investigating sequences of spin manifolds with lower sectional curvature bound, upper diameter bound and the property that the Dirac operator is not invertible. As a key ingredient of the proof we prove a generalization (under weaker curvature assumptions) of the renowned theorem by Gromov about almost flat manifolds. This is joint work with Burkhard Wilking.

Hierzu wird herzlich eingeladen.

C. Cederbaum, G. Huisken, C. Nerz