Universität Hamburg
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Kolloquium über Reine Mathematik

Einladung zu einem Vortrag

Dienstag, 4. Juni 2019

17 Uhr s.t., Geom H4

Prof. Dr. Andrei Moroianu
(Université Paris-Sud)

Conformally equivalent metrics with special holonomy

Abstract:

Every Riemannian manifold (M^n,g) has a natural covariant derivative called the Levi-Civita connection. One of its basic invariants is the (restricted) holonomy group $\mathrm{Hol}_0(M,g)$, which is a subgroup of the special orthogonal group $SO(n)$, defined up to conjugation by the parallel transport along contractible loops. We say that a Riemannian manifold has special holonomy if $\mathrm{Hol}_0(M,g)$ is a strict subgroup of $SO(n)$ (typical examples of manifolds with special holonomy are Riemannian products, Kähler manifolds, or symmetric spaces). In this talk I will explain the classification of compact manifolds carrying two conformally related Riemannian metrics with special holonomy, using previous results about the holonomy of locally conformally Kähler metrics, as well as the classification of conformal Killing forms on manifolds with special holonomy.

Vor dem Vortrag (ab 16.30 Uhr) stehen im Raum 327 Kaffee und Tee bereit.