

The seminar on differential geometry will continue on **October 8 from 10am in lecture room M5** by the lecture

Katharina Neusser:

C-projective equivalence in Kähler geometry

Abstract:

While a projective structure on a manifold is given by a class of affine connections that have the same (unparametrised) geodesics, a c-projective structure on a complex manifold is given by a class of affine complex connections that have the same "J-planar" curves. In this talk we will be mainly concerned with c-projective structures induced by Kähler metrics (via their Levi-Civita connections). We will present some work on the geometric and topological consequences of the existence of at least two c-projectively equivalent Kähler metrics, and on c-projective automorphism groups of Kähler manifolds. This talk is based on joint work with Calderbank--Eastwood--Matveev, and with Matveev.

I will try to balance the talk well so that those, who are unfamiliar with the topic, can follow well, but I also want to use the opportunity to give some more details about the proofs for those, who are and have already heard some short talks by me on the topic.