Seminář z diferenciální geometrie pokračuje 2.12.2019 od 10:00 v učebně M5

Vincent Pecastaing (University of Luxembourg):

Actions of higher-rank lattices on conformal and projective structures

Abstrakt:
The main idea of Zimmer's program is that in real-rank at least 2, the rigidity of lattices of semi-simple Lie groups makes that their actions on closed manifolds are understandable. After a short survey giving a more precise idea of Zimmer's conjectures and their context, I will give recent results about conformal and projective actions of cocompact lattices. The fact that these geometric structures do not carry a natural invariant volume is one of the main motivations. We will see that the real-rank is bounded above like when the ambient Lie group is acting, and that at the critical value, the manifold is globally isomorphic to a model homogeneous space. The proofs rely in part on an "invariance principle" recently introduced by Brown, Rodriguez-Hertz and Wang, which guarantees the existence of finite invariant measures in some dynamical context.