

Oberseminar Geometrie Department of Mathematics University of Fribourg Physics 2.52 Wednesday, 26 April 2023, 10:20

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Geometry of parallelizable manifolds

The subject of the talk is the differential geometry of Riemannian manifolds carrying a global coframe, expressed in terms of the torsion tensor of the associated flat connection. The basic model spaces in this context are Lie groups furnished with invariant vector fields and their quotients by discrete subgroups. Other examples are total spaces of principal fibre bundles equipped with a Cartan connection, and all orientable three-manifolds. Topics: canonical flat connection and equivalence problem, automorphisms, affine transformations and isometries, geodesics and Jacobi fields, local fundamental pseudo-groups, comparison theorems.