

Oberseminar Geometrie	Wednesday 20th March 2013
Department of Mathematics	10:20–12:00
University of Fribourg	Seminar room, Math. II (Lonza)

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‘Almost flat manifolds’

This talk will be centered on one of the classical “pinching” theorems of Riemannian geometry, due to Gromov in its original form: Closed manifolds admitting a Riemannian metric with suitably small curvature are diffeomorphic to infra-nilmanifolds.

Infra-nilmanifolds are generalizations of euclidean space forms, where abelian \mathbb{R}^n with its flat metric is replaced by a nilpotent Lie group with a left invariant metric. We will begin with background on nilpotent Lie groups and their quotients, explain a version of the theorem, outline its proof, and then discuss some closely related topics.