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Wouter Van Limbeek* (limbeek@math.uchicago.edu), Dept of Mathematics, University of Chicago, 5734 S University Ave, Chicago, IL 60637. *Riemannian manifolds with nontrivial local symmetry*. Preliminary report.

In this talk I will discuss the problem of classifying all closed Riemannian manifolds whose universal cover has nondiscrete isometry group. Farb and Weinberger solved this under the additional assumption that M is aspherical: roughly, they proved M is a fiber bundle with locally homogeneous fibers. However, if M is not aspherical, many new examples and phenomena appear. I will exhibit some of these, and discuss progress towards a classification. One new ingredient is Frankel's technique of averaging a harmonic map, which may be of independent interest. (Received September 04, 2012)