Riemannian manifolds with nontrivial symmetry

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Abstract. 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.