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Elahe Khalili Samani* (ekhalili@syr.edu). *Positive curvature and fundamental group.*

A 1960s question of Chern asks if every abelian subgroup of the fundamental group of a Riemannian manifold with positive sectional curvature is cyclic. While this is not true in general, there are some positive results in the presence of symmetry. I will discuss some new structural results along these lines. I will also discuss an application to an infinite family of positively curved manifolds. (Received September 15, 2019)