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Anna Siffert* (siffert@mpim-bonn.mpg-de), Vivatsgasse 7, 53111 Bonn, Germany. *Harmonic maps between manifolds with symmetry*. Preliminary report.

Harmonic maps are critical points of the energy functional. In the last century, Eells and Sampson, started the study of the following very important question:

Does every homotopy class of maps between Riemannian manifolds admit a harmonic representative?

For the special case that the target manifold is compact and all its sectional curvatures are nonnegative, Eells and Sampson answered this question in affirmative. However, for the case that the target manifold also admits positive sectional curvatures the answer to this question is still only known in special cases. In my talk I explain the construction of infinitely many new harmonic maps between Riemannian manifolds with symmetry. (Received September 18, 2017)