

Classification of special 2-fold coverings of a S^1 –bundle

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Abstract. (This is joint work with A. Bauval, D. Gonçalves, M.H. Melo.)
A special 2-fold covering of a principal S^1 –bundle P over a oriented surface is also a S^1 –bundle over the same surface with the particularity that its fiber is a square root of the fiber of P . All these special 2-fold coverings are weakly equivalent in the classical sense. It is necessary to add some constraint to get a classification ”à la Johnson”, corresponding to the particular case where the S^1 –bundle is the principal bundle associated to the tangent bundle of the surface.