

1084-57-90

**Stefan Friedl\***, Universitaet zu Koeln, Mathematisches Institut, 50931 Koeln, Germany.

*Complexity of surfaces in 4-manifolds with a free circle action.*

For most closed 3-manifolds we will determine the minimal complexity of surfaces representing homology classes in most circle bundles over the given 3-manifold. This is joint work with Stefano Vidussi. (Received August 24, 2012)