

## Positively curved manifolds with isometric torus actions

*Friday, November 9, 2018 2:30 PM (50 minutes)*

The classification of positively (sectional) curved manifolds is a long standing open problem in Riemannian geometry. So far it was a successful approach to consider the problem under the extra assumption of an isometric group action.

In this talk I will report on recent joint work with Lee Kennard and Burkhard Wilking in this direction. Among other things we show the following: Let  $M$  be a simply connected positively curved  $n$ -dimensional manifold with  $H^{odd}M, \mathbb{Q}) = 0$  and an isometric  $T^8$ -action. Then the rational cohomology ring of  $M$  is isomorphic to the rational cohomology of one of the CROSSes  $S^n$ ,  $\mathbb{C}P^{n/2}$  and  $\mathbb{H}P^{n/4}$ .

### Summary

**Presenter:** WIEMELER, Michael (WWU Münster)