

Topology of Sasakian manifolds and torus actions

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We will explain that one can extract topological information of Sasakian manifolds from the closed orbits of the Reeb flow. For example, one can characterize Sasakian manifolds with the minimum number of closed Reeb orbits as real cohomology spheres. We also discuss a GKM type formula for Sasakian manifolds. The main result of this talk is an Atiyah-Bott-Berline-Vergne type localization formula for the orbit foliation of the Reeb flow, which can be used to compute the volume of Sasakian manifolds in terms of closed Reeb orbits. This talk is based on joint work with Oliver Goertsches and Dirk Töben.