

- **Weich, Tobias: Dynamical resonances and topology (204)**

Dynamical Resonances have been introduced by Ruelle and Pollicott in order to study mixing properties of chaotic dynamical systems. In the past years they have additionally evolved to an interesting spectral invariant for geometric and topological questions. For example, Dyatlov and Zworski (Inventiones 210 -- 2017) have shown that on compact surfaces with strict negative curvature the multiplicity of a certain dynamical resonance equals the first Betti number. In this talk I will explain a generalization of this result to higher dimensions. A crucial passage in our proof is a reduction to the boundary at infinity of the universal covering space which allows to apply vector valued Poisson transformations. This is joint work with Benjamin Küster (Paris Orsay)