Twisted Ruelle zeta function on locally symmetric spaces, the Fried's conjecture and further applications

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Abstract

In this talk, we will present some recent results concerning with the special values of the dynamical zeta functions on locally symmetric spaces. In particular, we study the twisted Ruelle zeta function at zero and its relationship with spectral and topological invariants. These results can be viewed as extensions of previous results by Fried to the case of an arbitrary representation. Our techniques are based on the spectral theory of non-self-adjoint Laplacians and the Selberg trace formula. The results are part of joint work with Jan Frahm, Léo Bénard and Jan Frahm, and Frédéric Naud.