

RESONANT FORMS AT ZERO FOR DISSIPATIVE ANOSOV FLOW

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Time: Fri, Mar. 17, 20:00-21:00

Venue: Zoom: 618-038-6257, Password: SCMS

Abstract: The Ruelle zeta function is a natural function associated with the periods of closed orbits of an Anosov flow, and it is known to have a meromorphic extension to the whole complex plane. The order of vanishing of the Ruelle zeta function at zero is expected to carry interesting topological and dynamical information and can be computed in terms of certain resonant spaces of differential forms for the action of the Lie derivative on suitable spaces with anisotropic regularity. In this talk I will explain how to compute these resonant spaces for any transitive Anosov flow in 3D, with particular emphasis in the dissipative case, that is, when the flow does not preserve any absolutely continuous measure. A prototype example is given by the geodesic flow of an affine connection with torsion and we shall see that for such a flow the order of vanishing drops by 1 in relation to the usual geodesic flow due to the Sinai-Ruelle-Bowen measure having non-zero winding cycle. This is joint work with Mihajlo Cekić.