
TWISTED RUELLE ZETA FUNCTION ON LOCALLY SYMMETRIC SPACES, THE FRIED'S CONJECTURE AND FURTHER APPLICATIONS

Polyxeni Spilioti

Aarhus University

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In this talk, we will present the twisted Ruelle zeta function, associated with representations that are not necessarily unitary, and how its special value at zero is related to the complex-valued analytic torsion. The relation between the twisted Ruelle zeta function and spectral (or topological) invariants is the so called Fried's conjecture. In addition, we will present results that are related to the Fried's conjecture for hyperbolic surfaces and orbisurfaces. If time allows, we will present some recent results concerning the investigation of the spectrum of the twisted Laplacians, as the representation varies in a suitable Teichmüller space.