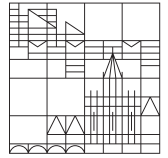# KWIM-Festtage

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Konstanz Women in Mathematics

Dynamical zeta functions, Lefschetz formulae and applications

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Abstract. The dynamical zeta functions of Ruelle and Selberg are functions of a complex variable s in some right half-plane of the complex plane and are associated with the geodesic flow on the unit sphere bundle of a compact hyperbolic manifold. They are represented by Euler- type products, which trace back to the Riemann zeta function. In this talk, we will present powerful tools from the field of spectral geometry, such as trace formulae and Lefschetz formulae, and the machiery that they provide to study the analytic properties of the dynamical zeta functions and their relation to spectral invariants. In addition, we will present other applications of the Lefschetz formula, such as the prime geodesic theorem for locally symmetric spaces of higher rank.