

Michele Schiavina : Fried's conjecture in quantum field theory

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I will discuss a field-theoretic interpretation of Ruelle zeta function, which “counts” prime geodesics on hyperbolic manifolds, as the partition function for a topological field theory (BF) with an axial-type gauge fixing condition available on the unit sphere bundle of the hyperbolic manifold. This suggests a rephrasing of a conjecture due to Fried, on the equivalence between Ruelle zeta function and analytic torsion, as gauge fixing independence in the Batalin–Vilkovisky formalism.

This is based on joint works with C. Hadfield and S. Kandel, as well as with T. Stucker.