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A rigidity theorem for the action of the diffeomorphism group on spaces of psc metrics

Thursday, November 8, 2018 9:20 AM (50 minutes)

For a closed, simply connected d-dimensional manifold spin M, we study the action of the (spin) diffeomorphism group of M on the space $\mathcal{R}^+(M)$ of psc metrics on M. Our main result is that the homotopy class of the map $f^* : \mathcal{R}^+(M) \to \mathcal{R}^+(M)$ only depends on the cobordism class in $\Omega^{\mathrm{Spin}}_{d+1}$ of the mapping torus of f. When properly formulated, the same result is true for manifolds with nontrivial fundamental group.

Summary

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