

## Stabilization of dissipative models on manifolds

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We establish uniform decay rate estimates for the linear wave equation subject to locally distributed internal damping on a compact  $n$ -dimensional Riemannian manifold  $(M, g)$ . We also obtain an approach for other equations, such as Schrödinger and plate equations, provided that the inverse inequality for the linear model is in place. In the particular case of the wave equation, where the well-known geometric control condition (GCC) is equivalent to the observability inequality, the obtained method generalizes our previous results published in TRANS. AMS(2009) and ARMA (2010) in what concerns the choice of dissipative regions.