

# A family of stable diffusions

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We consider a compact  $C^\infty$  Riemannian manifold with negative curvature,  $\bar{X}$  the geodesic spray, i.e. the vector field that generates the geodesic flow on the unit tangent bundle,  $\mathcal{W}^s$  the central stable foliation of the geodesic flow. For  $\lambda \in \mathbb{R}$ , let  $\mathcal{L}_\lambda = \Delta^s + \lambda \bar{X}$  be the generator of a leafwise diffusion on  $SM$ .

As  $\lambda \rightarrow -\infty$ , the unique stationary probability measure of the diffusion  $\mathcal{L}_\lambda$  converges to the normalized Liouville measure. This is a joint work (in preparation) with Lin Shu.