A Sard's theorem for stochastic flow measures, and McKean-Singer formulae for certain foliations

K.D. Elworthy (Maths Institute, University of Warwick, England)

Abstract. Diffusion measures on path spaces of Lie groups and diffeomorphism groups can have nice properties giving rise to a comparatively simple proof that they assign measure zero to the sets of critical values of suitable smooth Fredholm maps. This is relevant to Kusuoka's approach to the McKean-Singer formula for the Euler characteristic of a compact Riemannian manifold in terms of the supertrace of its heat kernel. I will describe this version of Sard's theorem and relate it to a proposed extension of Kusuoka's method to a tangential version of the McKean-Singer formula for a class of foliated manifolds.