Shavgulidze, E. T.

On a measure that is quasi-invariant with respect to the action of a group of diffeomorphisms of a finite-dimensional manifold. (English. Russian original) Zbl 0704.58010


A countably additive Borel measure on the group $\text{Diff}^{2k}(M)$ of diffeomorphisms of class $C^{2k}$ on an n-dimensional manifold $M$ is constructed which is quasi-invariant with respect to the action of the subgroup $\text{Diff}^{2k+3m}_0(M)$ consisting of the $C^{2k+3m}$-diffeomorphisms with compact support. Here $m$ is an integer greater than $(n+1)/2$ and $k > 3mn$.

Reviewer: A. Kriegl

MSC:

58D20 Measures (Gaussian, cylindrical, etc.) on manifolds of maps
28C10 Set functions and measures on topological groups or semigroups, Haar measures, invariant measures
58D05 Groups of diffeomorphisms and homeomorphisms as manifolds

Keywords:
group of diffeomorphisms; Borel measure