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Title: On the structure of the homeomorphism and diffeomorphism groups fixing a point

Author(s): Jacek Lech and Ilona Michalik

Let M be a manifold, $p \in M$ and let $\mathcal{H}(M,p)$ be the identity component of the group of all compactly supported homeomorphisms of M fixing p. It is shown that $\mathcal{H}(M,p)$ is a perfect group. Next, we prove that the group $\mathcal{H}(\mathbb{R}^n,0)$ is bounded. In contrast, in the C^∞ category the diffeomorphism group $\mathcal{D}^\infty(\mathbb{R}^n,0)$, analogous to $\mathcal{H}(\mathbb{R}^n,0)$, is neither perfect nor bounded. Finally, the boundedness and uniform perfectness of $\mathcal{H}(M,p)$ is studied.

Address:
Jacek Lech
AGH University of Science
and Technology
Faculty of Applied Mathematics
al. Mickiewicza 30
30-059 Krakow
Poland

Address:
Ilona Michalik
AGH University of Science
and Technology
Faculty of Applied Mathematics
al. Mickiewicza 30
30-059 Krakow
Poland