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Diffeomorphism Groups of Convex Polytopes

Let M be a convex polytope in $\mathbb{R}^n$, with non-empty interior. We turn the group $\mathrm{Diff}(M)$ of all C^∞-diffeomorphisms of M into a regular Lie group.

Keywords: Polytope, polyhedron, diffeomorphism group, infinite-dimensional Lie group, regularity, manifold with corners, local addition.

MSC: 58D05; 22E65, 46T05, 46T10, 52B11, 52B15, 52B70.