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Curvature homogeneous spaces whose curvature tensors have large symmetries

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Abstract: We study curvature homogeneous spaces or locally homogeneous spaces whose curvature tensors are invariant by the action of “large” Lie subalgebras \mathfrak{h} of $\mathfrak{so}(n)$. In this paper we deal with the cases of $\mathfrak{h} = \mathfrak{so}(r) \oplus \mathfrak{so}(n-r)$ ($2 \leq r \leq n-r$), $\mathfrak{so}(n-2)$, and the Lie algebras of Lie groups acting transitively on spheres, and classify such curvature homogeneous spaces or locally homogeneous spaces.

Keywords: locally homogeneous spaces, curvature homogeneous spaces, totally geodesic foliations

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