Title: Homogeneous contact metric structures on five-dimensional generalized symmetric spaces

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We obtain the full classification of invariant contact metric structures on five-dimensional Riemannian generalized symmetric spaces. Different classes of examples of these spaces show different behaviours. In fact, while some of these spaces do not admit any invariant contact metric structure, we find and describe four new families of homogeneous structures. Investigating their geometric properties, we find that these new examples are not Sasakian (not even K-contact), but they all belong to the wider class of H-contact manifolds. On the other hand, we also obtain a rigidity result, proving that invariant contact metric structures on five-dimensional Riemannian generalized symmetric spaces which are naturally reductive, are exactly the ones giving to them the structure of globally φ-symmetric spaces, already classified in [**?**].

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