

# CONFORMAL RELATIVES OF SYMMETRIC SPACES

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Motivated by the theory of curvature-homogeneous manifolds on one hand, and by the classical Weyl-Schouten Theorem on the other, we ask the following question: is a Riemannian manifold having “the same” Weyl conformal curvature tensor as a given homogeneous space  $M$  is actually conformally equivalent to  $M$ ? The answer is in general in negative, but is in positive when  $M$  is a symmetric space of dimension  $n > 5$  whose de Rham decomposition contains no factors of constant curvature.