

Hypersurfaces in space forms satisfying some curvature conditions

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Abstract

In this talk we will present curvature properties of pseudosymmetry type of hypersurfaces isometrically immersed in $(n + 1)$ -dimensional spaces of constant curvature, $n \geq 4$, having at every point at most three distinct principal curvatures. Under some additional assumptions, such hypersurfaces are pseudosymmetric, Ricci-pseudosymmetric, manifolds with pseudosymmetric Weyl tensor, or satisfy other conditions of this kind (see [1]-[9] and references therein). For instance, type number two hypersurfaces are pseudosymmetric manifolds of constant type, non-conformally flat and non-Einstein hypersurfaces with two distinct principal curvatures are Roter type manifolds, the Cartan hypersurfaces of dimension 6, 12 or 24 are non-pseudosymmetric Ricci-pseudosymmetric manifolds of constant type, and 2-quasi-umbilical hypersurfaces are manifolds with pseudosymmetric Weyl tensor.

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