

New tensor fields of real hypersurfaces in non-flat complex space forms

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Abstract

In this poster new tensor fields defined on real hypersurfaces in non-flat complex space forms are presented and results concerning them in terms of the new tensor fields are provided. First, the Ricci tensor with respect to the k -th generalized Tanaka-Webster connection of real hypersurfaces and the notion of k -th generalized Tanaka-Webster Einstein is introduced. Next, the k -th generalized Tanaka-Webster Einstein real hypersurfaces in non-flat complex space forms are classified. Furthermore, tensor fields related to the $*$ -Ricci tensor of real hypersurfaces such as the $*$ -Weyl curvature tensor are presented and results concerning real hypersurfaces with vanishing $*$ -Weyl curvature tensor are provided.

The results are based on a joint work with George Kaimakamis (Hellenic Army Academy) and Juan de Dios Perez (Universidad de Granada).