

**HOPF HYPERSURFACES ADMITTING ϕ -INVARIANT RICCI TENSORS
IN A NONFLAT COMPLEX SPACE FORM**

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Received March 13, 2014

ABSTRACT. We investigate real hypersurfaces with ϕ -invariant Ricci tensors in a non-flat complex space form $\widetilde{M}_n(c)$. In particular, we classify Hopf hypersurfaces having weakly ϕ -invariant Ricci tensor in $\widetilde{M}_n(c)$. In addition, we verify the non-existence of Hopf hypersurfaces with strongly ϕ -invariant Ricci tensor in $\widetilde{M}_n(c)$ and the non-existence of ruled real hypersurfaces with weakly ϕ -invariant Ricci tensor in $\widetilde{M}_n(c)$.

Key words and phrases. real hypersurfaces, non-flat complex space forms, almost contact metric structure, Ricci tensor, homogeneous real hypersurfaces, Hopf hypersurfaces, ruled real hypersurfaces.