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Real hypersurfaces in nonflat complex space forms with commuting structure Jacobi operator. (English summary)


Let $M$ be a real hypersurface of a non-flat complex space form $\overline{M}$ of complex dimension $\geq 3$ and denote by $R$ the Riemannian curvature tensor of $M$. For each tangent vector $X$ to $M$ define the Jacobi operator $R_X = R(\cdot, X)X$. Let $\xi = -JN$ be the structure vector field on $M$, where $J$ is the complex structure of $\overline{M}$ and $N$ is a unit normal vector field of $M$. The authors prove that there are no real hypersurfaces of $\overline{M}$ with the property that $R_\xi \circ R_X = R_X \circ R_\xi$ for all tangent vectors $X$ to $M$.

Reviewed by Jürgen Berndt

References


Note: This list reflects references listed in the original paper as accurately as possible with no attempt to correct errors.

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