

HYPERSURFACES OF KÄHLER AND SASAKI MANIFOLDS.

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A classical problem in Riemannian geometry could be stated as follows: when a Riemannian manifold can be isometrically immersed into a fixed Riemannian manifold. For example, the Gauss and Codazzi-Mainardi equations are necessary and sufficient conditions for the existence of an isometric immersion into \mathbb{R}^n , \mathbb{S}^n or \mathbb{H}^n . It turns out that Spin^c geometry is a natural framework to study some characterization of hypersurfaces of Kähler manifolds (the complex projective space $\mathbb{C}P^2$) and Sasaki manifolds (Thurston geometries).