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GENERIC SUBMANIFOLDS OF SASAKIAN MANIFOLDS

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§0. Introduction.

In a previous paper [13], the present authors studied generic submanifolds immersed in complex space forms by the method of Riemannian fibre bundles.

The purpose of the present paper is to study generic submanifolds of Sasakian manifolds, especially those of Sasakian space forms.

In §1, we state some known results on submanifolds of Sasakian manifolds and study certain properties of the second fundamental forms of such submanifolds.

In §2, we define generic submanifolds of Sasakian manifolds and prove Propositions 2.1 and 2.2 on totally contact-umbilical generic submanifolds.

§3 is devoted to the study of the f-structure which a generic submanifold admits and to that of complete integrability of the distributions $\mathcal{L}$ and $\mathcal{T}$ associated with this f-structure.

In §4, we construct an example of generic submanifold of a Sasakian space form and in §5 we prove Theorem 5.1 which characterizes complete generic minimal Einstein submanifolds of S^{2m+1} with parallel second fundamental form.

In §6, we define pseudo-umbilical submanifolds of Sasakian manifolds and prove propositions and theorems on pseudo-umbilical generic submanifolds and in §7 we study pseudo-umbilical hypersurfaces by the method of Riemannian fibre bundles.

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