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“Algebraic and Geometric Methods of Analysis”

Book of abstracts

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A Flat $(CHR)_3$-curvature tensor in a Trans-Sasakian Manifold

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Recently, we defined a $(CHR)_3$-curvature tensor in almost contact Riemannian manifolds([3]) using M. Prvanovic's paper ([4]).

On, 2009, A. A. Shaikh and Y. Matsuyama considered a trans-Sasakian manifold which is a generalization of a Kenmotsu and Sasakian manifold and got some interesting results([5]).

In this paper, we consider this tensor field in a trans-Sasakian manifold. Moreover, we define the notion of the $(CHR)_3$-flatness in an almost contact Riemannian manifold. Then, we consider this notion in a trans-Sasakian manifold and determine the curvature tensor, the Ricci tensor and the scaler curvature. Finally, we get a condition which the Ricci tensor becomes a generalized quasi- or quasi-Einstein ([1], [2]).

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Зміст