Turkish Journal of Mathematics

Applications of the Tachibana Operator on Problems of Lifts

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Abstract: The purpose of the present paper is to study, using the Tachibana operator, the complete lifts of affinor structures along a pure cross-section of the tensor bundle and to investigate their transfers. The results obtained are to some extent similar to results previously established for tangent (cotangent) bundles \lbrack 1\rbrack. However there are various important differences and it appears that the problem of lifting affinor structures to the tensor bundle on the pure cross-section presents difficulties which are not encountered in the case of the tangent (cotangent) bundle.

Key Words: Tensor, bundle, affinor, complete lift, pure cross-section, Tachibana operator.