

Metric of Special $2F$ -flat Riemannian Spaces

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Abstract

In this paper we find the metric in an explicit shape of special $2F$ -flat Riemannian spaces V_n , i.e. spaces, which are $2F$ -planar mapped on flat spaces. In this case it is supposed, that F is the cubic structure: $F^3 = I$.

Key words: $2F$ -flat (pseudo-)Riemannian spaces, $2F$ -planar mapping, cubic structure.

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1 Introduction

$2F$ - and pF -planar mappings are studied in these papers [4, 5, 17]. The mentioned mappings are the generalization of geodesic, holomorphically projective and F -planar mappings [1, 2, 6, 7, 8, 9, 10, 11, 14, 15, 16, 18].

As it is known, the Riemannian space with the constant curvature, resp. the Kählerian space with the constant holomorphically projective curvature, admits a geodesic, resp. holomorphically projective, mapping onto a flat space, i.e. the space with a vanishing curvature tensor.

The consideration in the present paper is performed in the tensor form, locally, in a class of substantial real smooth functions. The dimension n of the spaces under consideration, as a rule, is greater than 3. All the spaces are supposed to be connected.