ON FACTORIZATION OF SYMMETRIC POSITIVE SEMI-DEFINITE BOREL MEASURABLE (2,0)-TENSOR FIELDS

Azarina S.V., Gliklikh Yu. E.

It is shown that a positive semi-definite symmetric (2,0)-tensor field α that is Borel measurable, can be represented in the form $\alpha = AA^*$ with Borel measurable A where in the case of linear spaces A is a (1,1)-tensor field and A^* is the conjugate tensor field while in the case of manifolds A is a field of linear operators sending a certain linear space into tangent spaces to the manifold and A^* is the field of conjugate operators.