

Zengin, Füsün Özen**M-projectively flat spacetimes.** (English) Zbl 1289.53089

Math. Rep., Bucur. 14(64), No. 4, 363-370 (2012).

Summary: The object of the present paper is to study M-projectively flat Riemannian manifolds. It is shown that an M-projectively flat Riemannian manifold is an Einstein manifold. In addition, some theorems about energy-momentum tensors satisfying the Einstein field equations with a cosmological constant of the M-projectively flat spacetime are proved.

MSC:

- 53C15** General geometric structures on manifolds (almost complex, almost product structures, etc.) Cited in **19** Documents
- 53C25** Special Riemannian manifolds (Einstein, Sasakian, etc.)
- 53B15** Other connections
- 53B20** Local Riemannian geometry
- 83C05** Einstein's equations (general structure, canonical formalism, Cauchy problems)

Keywords:

M-projective curvature tensor; energy-momentum tensor; Killing vector field; conformal Killing vector field; symmetry inheritance property; quadratic Killing tensor; quadratic conformal Killing tensor