

**ON THE GEOMETRY OF TOTALLY GEODESIC  
RIEMANNIAN FOLIATIONS***A. Ya. Narmanov*

In the present article we study a totally geodesic Riemannian foliation  $F$  on a complete Riemannian manifold. We introduce a metrical connection  $\tilde{\nabla}$  that is different from the Levi–Civita connection. The distribution defined by the foliation  $F$  and its orthogonal complement are parallel. We also study an interrelation between the vertical–horizontal homotopy and the metrical connection  $\tilde{\nabla}$ . In the article we prove that the complementary (by orthogonality) distribution to the foliation  $F$  is completely integrable if and only if the connection  $\tilde{\nabla}$  coincides with the Levi–Civita connection.

*Key words and phrases:* fibering, foliation, connection, evolvent, holonomy.

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