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Title: Flow-invariant structures on unit tangent bundles

Author(s): Eric Boeckx, Jong Taek Cho and Sun Hyang Chun

We study unit tangent bundles T_1M for which the structural operator $h = \frac{1}{2} \mathfrak{L}_\xi \phi$, its characteristic derivative $h' = \nabla_\xi h$ or the characteristic Jacobi operator $\ell = R(\cdot, \xi)\xi$ is invariant under the geodesic flow generated by the characteristic vector field ξ . Also, we prove that the operator ℓ on T_1M is η -parallel if and only if the base manifold is of constant curvature.

Address:

Eric Boeckx
Department of Mathematics
Katholieke Universiteit Leuven
Celestijnenlaan 200B
3001 Leuven
Belgium
E-mail: eric.boeckx@wis.kuleuven.ac.be

Address:

Jong Taek Cho
Department of Mathematics
Chonnam National University
CNU The Institute of Basic Sciences
Kwangju 500-757
Korea

Address:

Sun Hyang Chun
Department of Mathematics
Chonnam National University
Graduate School
Kwangju 500-757
Korea