

INVARIANTS OF VECTOR DISTRIBUTIONS OF CORANK 2

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We shall discuss equivariants and invariants of vector distributions $D \subset TM$ of corank 2 on even-dimensional manifolds. We shall assign, to a given distribution D , a field of characteristic lines in the annihilator D^\perp , as well as a field of characteristic lines in D . These fields have canonical normalizations, which yield fields of normalized characteristic 1-forms and normalized characteristic vector fields. The equivalence problem for such distributions is reduced to equivalence of tuples of differential 1-forms or tuples of vector fields. We give explicit criteria for equivalence of generic distributions. In particular, we construct explicitly functional invariants.