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Homotopy invariants of foliations.

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Let G be a reductive Lie group and $I(G)_l$ the ring of invariant polynomials on G modulo the ideal of elements of degree $> 2l$. Let $\Pi(I(G)_l)$ and $\Pi(X)$ be the graded Lie algebras associated with the DG-algebra $I(G)_l$ and with the de Rham algebra of a manifold X, respectively. If X is a G-foliated manifold then the Chern-Weil homomorphism induces a map $h\colon \Pi(X) \to \Pi(I(G)_l)$ which factors through $\Pi(B\Gamma_G^q)$. The purpose of this note is to determine the Lie algebra structure of $\Pi(I(G)_l)$ and to detect the elements in the image of $\Pi(B\Gamma_G^q)$ in $\Pi(I(G)_l)$. The relationship of h with the characteristic homomorphism for G-foliations is also studied.

{For the entire collection see 81i:57001}

Reviewed by *B. Cenkl*