CHARACTERISTIC CLASSES ASSOCIATED TO DIRAC STRUCTURES

ALINE ZANARDINI [1]

[1] FEDERAL UNIVERSITY OF PARANA

Resumo/Abstract:
We are interested in the problem of classification, up to homotopy, of (real) Dirac structures, particular Lie subalgebroids of exact Courant algebroids, which generalize both Poisson and presymplectic geometries, [1][2][6]. It is known that a maximally isotropic subbundle L of an exact Courant algebroid $E \simeq TM \oplus T^*M$ is in one-to-one correspondence with an orthogonal operator acting pointwise in TM, that is, with a section of $O(TM)$, [1][5]. Given such a section, σ, we use the generalized Chern-Weil map, [4], and the BRST model for equivariant cohomology, [3], to obtain explicit characteristic forms, the cohomology classes of which are homotopical invariants of σ and L, simultaneously.

References

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