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Homotopy versions of Jacobi bundles

Abstract

In this talk I will present the notion of a homotopy Kirillov structure on the sections of an even line bundle over a supermanifold. When the line bundle is trivial we have a homotopy Jacobi structure. These structures are understood furnishing the module of sections with an L_∞ -algebra; which is a ‘higher’ or ‘homotopy’ version of a Lie algebra.

The listener is only expected to have some rudimentary familiarity with Poisson and hopefully Jacobi manifolds. No prior knowledge of L_∞ -algebras will be assumed and our treatment of supermanifolds will be elementary.

The talk will be based on the preprint ‘Jacobi structures up to homotopy’ (arXiv:1507.00454 [math.DG]) which is joint work with Alfonso Tortorella, Università degli Studi di Firenze, Italy.