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Symplectic geometry on graded manifolds

Graded manifolds can be thought of as manifolds equipped with a suitable sheaf of graded algebras or, more intuitively, manifolds with local coordinates carrying an additional grading. I will discuss how symplectic geometry on graded N -manifolds leads to effective methods for studying objects in (higher) Lie theory and differential geometry that have gained interest in recent years, especially in connection with mathematical physics. The basic principle is that complicated/unfamiliar objects in classical geometry can often be translated into standard/familiar geometric structures defined on symplectic graded manifolds. I will illustrate fruitful applications of this viewpoint.