Abstract

For a Lie algebroid A with groupoid G, we realize the symplectic leaves of the Lie Poisson structure on the dual bundle of A^* as coadjoint orbits of the Jet groupoid JG. It is shown that there is a fiber bundle structure on each symplectic leaf. In the case of the Atiyah algebroid of a Principal fiber bundle, a symplectic leaf is the universal phase space constructed by Weinstein and the fiber bundle is the phase space for a classical particle in a Yang-Mills field. This is a joint work with Honglei Lang.