On Riemannian foliations in Poisson manifolds.

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Abstract

The interaction between Riemannian and Poisson geometry has been considered in different mathematical and physical contexts and recently it has been proposed as a way to formulate semiclassical approaches to quantum gravity. From a purely mathematical point of view this interaction gives rise to interesting geometric behavior. The aim of this talk is to show how some notions of compatibility between Riemannian and Poisson structures on manifolds determine the geometric properties of its symplectic foliation and discuss some related questions.