

FROM SOME BASIC ASPECTS IN POISSON GEOMETRY
TO INVARIANT MEASURES IN NONHOLONOMIC
MECHANICS

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In the first part of this talk, I will present some aspect basic related with Poisson geometry: some interesting examples, hamiltonian vector fields and the symplectic foliation on a Poisson manifold and the modular class of a Poisson structure. In the second part of the talk, I will discuss the existence of invariant volume forms for hamiltonian mechanical systems on fiberwise linear Poisson manifolds. Finally, in the last part of the talk, I will present some recent results on invariant measures for nonholonomic mechanical systems. In order to illustrate all these results, I will discuss several examples.