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Rui Loja Fernandes*, Department of Mathematics, University of Illinois at Urbana-Champaign, 1409 W. Green Street, Urbana, IL 61801. *Global Aspects of Poisson Geometry*.

A Poisson bracket on a manifold is the geometric structure relevant for Hamiltonian dynamics. A Poisson bracket induces a foliation of the manifold by symplectic leaves, which in general is singular: the dimension of the leaves can jump. The study of the global properties of a Poisson bracket combines the symplectic geometry of each leaf, the topology of the leaves and the singularities of the foliation at places where the dimension jumps. In this talk, I will survey some fascinating recent advances in the global geometry of manifolds equipped with a Poisson bracket. (Received February 09, 2015)