

François Lalonde

Title: Geometry of the Poisson bracket

Abstract:

A symplectic manifold is a Poisson manifold, and conversely with mild hypotheses. The well-known rigidity phenomena in covariant symplectic topology have counterparts in contravariant Poisson topology, expressed by the Poisson bracket rigidity. This started with the works of Cardin-Viterbo, Entov-Polterovich, and more recently with Buhovsky and collaborators, as well as Payette. One of the main goals is to define a kind of functor that assigns to each symplectic manifold its level of Poisson non-commutativity, leading to deep consequences on its quantization.