The Diffeomorphism Type of Canonical Integrations Of Poisson tensors on Surfaces

David Martínez Torres

Abstract. A surface Σ endowed with a Poisson tensor π is known to admit a *canonical integration* $\mathcal{G}(\pi)$, which is a 4-dimensional manifold with a (symplectic) Lie groupoid structure. In this short note we show that when π is not an area form on the 2-sphere, then $\mathcal{G}(\pi)$ is diffeomorphic to the cotangent bundle $T^*\Sigma$, this extending results of a previous paper and Bonechi, Ciccoli, Staffolani, and Tarlini.