

Abstract

In this talk I will show how to obtain an infinite dimensional Lie algebra of exotic gauge invariant observables that is closed under Goldman-type bracket associated with monodromy matrices of flat connections on a compact Riemann surface for G_2 gauge group. As a byproduct, we give an alternative derivation of known Goldman bracket for classical gauge groups $GL(n, \mathbb{R})$, $SL(n, \mathbb{R})$, $U(n)$, $SU(n)$, $Sp(2n, \mathbb{R})$ and $SO(n)$.