Explicit formulas for symplectic forms on some moduli spaces

Christopher King
Department of Mathematics
Northeastern University

Abstract

We consider the moduli space of flat connections on a principal G-bundle over a compact surface. There are several natural 2-forms which can be defined on this moduli space. We show the relation between these 2-forms in the case where the surface has no boundary, and use them to describe the symplectic structure of the moduli space. In the case where the surface has boundary, we show how these forms can be modified to provide a symplectic structure.