Self Duality From Two Views

Abstract

For a vector bundle $E \to M$, with connection A and curvature F_A, the (anti) self-duality equations are $F_A = \pm * F_A$. In this talk we introduce this from two points of view. One by considering the kernel of some moment map on a space of Dirac operators, and the other by considering topological constraints on the curvature F_A. My main goal is to give you (and my self) a basic understanding of spin bundles and the Dirac operator.