

$SU(p, p + 1)$ -HIGGS BUNDLES AND THE HITCHIN MAP

ANA PEÓN-NIETO

The moduli space Higgs_X of $SU(p, p + 1)$ -Higgs bundles on a Riemann surface X is homeomorphic to the character variety for the same group. Its points are pairs (E, ϕ) of a holomorphic vector bundle $E \rightarrow X$ and an endomorphism $\phi : E \rightarrow E \otimes T^*X$ with some extra data. In this talk we will study the Hitchin system on Higgs_X , a fibration which assigns to each pair (E, ϕ) the characteristic polynomial of ϕ . We will use this to deduce topological information about the character variety.