BRANES ON G-MANIFOLDS

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Abstract. Let X be Calabi-Yau manifold acted by a group G. We give a definition of G-equivariance for branes on X, and assign to each equivariant brane an element of the equivariant cohomology of X that can be considered as a charge of the brane. We prove that the spaces of strings stretching between equivariant branes support representations of G. This fact allows us to give formulas for the dimension of some of such spaces, when X is a flag manifold of G.

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1. Introduction

Let X be a compact Kähler n-manifold analytically acted by a Lie group G. Some objects related with X admit an "equivariant" version, when they are equipped with a G-action compatible with its structure, for example, the equivariant vector bundles on X.