

# Introducing Donaldson-Thomas theory with an eye towards character varieties

*Monday, June 19, 2017 4:10 PM (1 hour)*

## Abstract

Despite the fact that Donaldson-Thomas theory has been developed to study moduli spaces in a 3-dimensional context, it can (conjecturally) also be used to analyse moduli in 2-dimensional situations as for example sheaves on K3 surfaces, Higgs bundles and character varieties. We will focus on character varieties as annoying technical difficulties disappear and everything can be proven rigorously by a technique called dimension reduction. In the first of two talks on this topic I am going to introduce Donaldson-Thomas theory in order to set the scene for the second talk provided by my collaborator Ben Davison.

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