

The Vafa-Intriligator formula via virtual localization

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Abstract

We consider the Quot scheme of quotients of the trivial bundle of any rank and degree over a smooth algebraic curve of arbitrary genus. We study intersections of natural cohomology classes on Quot, and their evaluations against a certain virtual fundamental cycle. We show how virtual intersections of a special collection of classes can be computed via the Vafa-Intriligator formula. The method presented here also gives intersections not covered by the formula mentioned above. Finally, we present an application to the moduli space of vector bundles.

This is joint work with A. Marian.