

Queen's Algebraic Geometry — Seminar —

INSTANTON COUNTING AND NON-ABELIAN LOCALIZATION

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Abstract

Nekrasov has shown how the low-energy behaviour of certain super-symmetric quantum field theories can be derived from calculating equivariant volumes of moduli-spaces of instantons. We review this and related recent work, and then sketch an alternative method in symplectic geometry for calculating the equivariant volumes, using varying compactifications of the ADHM spaces and the Jeffrey-Kirwan method of non-abelian localization. The advantage of this method is that it does not require smoothness of the moduli-spaces, and is therefore very suited for calculations on the moduli-spaces for classical gauge groups other than $SU(n)$.

Monday, January 23, 2006
4:00pm – 5:00pm
202 Jeffery Hall