Harvard-M.I.T. Algebraic Geometry Seminar

INVOLUTIONS AND LINEAR SYSTEMS ON HOLOMORPHIC IRREDUCIBLE MANIFOLDS

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Abstract:

Let S be a $K3$ surface with a divisor D of self-intersection 2. There exists an involution $\phi\colon S \to S$ which almost represents the reflection $R_D\colon H^2(S) \to H^2(S)$ in the span of $c_1(D)$, i.e. $H^2(\phi^*)$ differs from R_D by a product of reflections in the orthogonals of classes represented by smooth rational curves. We discuss the problem: does this result generalize in higher dimensions? i.e. does it hold for irreducible holomorphic symplectic manifolds? Main motivation: describe explicitly all deformations of $(K3)^{[2]}$ which carry an ample divisor of self-intersection 2 for Beauville's quadratic form.

Tuesday, October 14th
3:00 p.m.
Harvard Rm 507

`http://www-math.mit.edu/~jstarr/03fsem/`.