

Stanford Algebraic Geometry — Seminar —

AN AMAZING TETRAHEDRON OF EQUIVALENT THEORIES

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Abstract

There are four different theories that look geometrically very different, but surprisingly turn out to be isomorphic. They are

1. the Gromov-Witten theory of $\mathbb{P}^1 \times \mathbb{C}^2$,
2. the Donaldson-Thomas theory of $\mathbb{P}^1 \times \mathbb{C}^2$,
3. the quantum cohomology of $\text{Hilb}(\mathbb{C}^2)$, and
4. the orbifold quantum cohomology of $\text{Sym}(\mathbb{C}^2)$.

In this talk, I will describe all of these theories and a few of the equivalences.

Friday, February 11

3:15 p.m.

Room 383-N

<http://math.stanford.edu/~vakil/s0405/>