

Stanford Algebraic Geometry — Seminar —

QUANTUM COHOMOLOGY OF ISOTROPIC GRASSMANNIANS

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Abstract

The (small) quantum cohomology ring of a homogeneous space is a deformation of the classical cohomology ring, which uses the three point, genus zero Gromov-Witten invariants as its structure constants. I will present structure theorems for the quantum cohomology of isotropic Grassmannians, including a quantum Pieri rule for multiplication with the special Schubert classes, and a presentation of the quantum ring over the integers with the special Schubert classes as the generators. These results are new even for the ordinary cohomology of isotropic Grassmannians, and are proved directly from the definition of Gromov-Witten invariants by applying classical Schubert calculus to the kernel and span of a curve. This is joint work with A. Kresch and H. Tamvakis.

Friday, January 21

3:15 p.m.

Room 383-N