Meeting: 1001, Evanston, Illinois, SS 1A, Special Session on Modern Schubert Calculus

1001-14-109 **Leonardo Constantin Mihalcea*** (`lmihalce@umich.edu`), Dept. of Mathematics, 525 E University, East Hall, Ann Arbor, MI 48109. *Equivariant Quantum Schubert Calculus.*

The (small) equivariant quantum cohomology (eq.q.coh.) of a (smooth) variety X is an algebra which is a deformation of both equivariant and quantum cohomology algebras of X.

In this talk I will present two properties of the eq.q.coh. of the Grassmannian which extend from its equivariant restriction. One is that there is a certain recurrence relation, which is implied by the eq.q. Pieri rule (i.e. the multiplication with the divisor class), and which determines completely the eq.q. multiplication.

The second is a positivity property of the structure constants of the eq.q.coh., which are certain polynomials (the 3-point, genus 0, equivariant GW-invariants, introduced by Givental and Kim). This positivity holds for any homogeneous space G/P and generalizes the equivariant positivity conjectured by Peterson and proved by Graham. (Received August 17, 2004)