Seminar/Talk

Quantum K-theory of flag varieties

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The Gromov-Witten theory studies enumerative invariants of a projective variety X through counting nodal curves, and gives a family of deformed multiplication structures on the cohomology of X, known as the quantum cohomology. For flag variety $X=G/B$, relations in its quantum cohomology may be obtained through studying the differential equations solved by the generating function known as the J-function, which in turn come from the Toda lattice system of the Langlands dual group of G. In the first part of this talk, we review the story above. In the second part of this talk, we discuss how much of it still holds in K-theoretic settings, where quantum K-theory will replace quantum cohomology, and difference equations will replace differential equations. Quantum K-theory arises naturally in the framework of 3D mirror symmetry, a duality between mirror holomorphic symplectic varieties.

Thursday, October 31, 2024 01:00pm - 03:00pm
Office Bldg West / Ground floor / Heinzel Seminar Room (I21.EG.101)

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