

USB DEPARTMENT OF MATHEMATICS &
INSTITUTE FOR MATHEMATICAL SCIENCES

Colloquium

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Formulas for quiver varieties

A quiver variety is a general type of degeneracy locus associated to a quiver of vector bundles and bundle maps over a variety. Examples include Schubert varieties in flag manifolds and determinantal varieties. I have proved a formula for the Grothendieck class of a quiver variety when the underlying quiver is equioriented of type A . This formula is stated in terms of integers called quiver coefficients, which are generalizations of Littlewood-Richardson coefficients. Knutson, Miller, and Shimozono have shown that the lowest degree coefficients, which describe the cohomology class of the quiver variety, are non-negative. I will speak about a proof that general quiver coefficients have signs that alternate with codimension. I will also explain a cohomology formula for non-equioriented quiver varieties, which I have recently proved with R. Rimanyi.

Thursday - January 27, 2005

Room P-131 4:00 pm