UNIVERSITY AT ALBANY
State University of New York

College of Arts and Sciences
Department of Mathematics and Statistics

Algebra/Topology Seminar

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Old Formulas for Degeneracy Loci, with a New Twist

Thursday, January 31, 2019
1:15 p.m. in ES-143

Abstract. A basic problem from the 19th century asks for the degree of the locus of symmetric matrices of bounded rank; answers were given by Schubert and Giambelli. More recently, many extensions of this problem have been considered, including versions coming from symmetric maps of vector bundles, or for vector bundles equipped with a nondegenerate bilinear form. I will discuss ongoing work with William Fulton, in which we allow the bilinear form to be "twisted," so that it takes values in a nontrivial line bundle. The formulas we obtain extend those of Billey–Haiman, Ikeda–Mihalcea–Naruse, and others, and exhibit new connections with algebraic combinatorics.