

Meeting: 1007, Santa Barbara, California, SS 14A, Special Session on Algebraic Geometry and Combinatorics

1007-14-111 **Alexander K. Woo*** (awoo@math.berkeley.edu) and **Alexander Yong.** *Gorenstein Schubert varieties.*

We give a new combinatorial characterization for which Schubert varieties (for $SL(n)$) are Gorenstein. Gorenstein-ness is a technical algebro-geometric condition which is a weakening of smoothness. In analogy with the now classic result of Lakshmibai and Sandhya characterizing smooth Schubert varieties in terms of pattern avoidance conditions, our results are in terms of a generalization of pattern avoidance which we describe. When combined with other geometric results, our results are further evidence that the singularity structure of Schubert varieties is not too complicated. If time permits we will also describe some open problems and ongoing work. (Received February 12, 2005)