The question we will consider is what is the singular locus of a Schubert variety. Although Schubert varieties are familiar to most geometers as being certain subvarieties of a Grassmann which are used enumerative geometry, the Schubert varieties $X$ we will consider are the closures of the $B$-orbits in a generalized flag variety $G/P$. Identifying the singular locus of $X$ turns out to be equivalent to finding the $T$-fixed points in $X$ which are singular in $X$, where $T$ is a maximal torus in the group $G$. This fact turns our problem into a combinatorial question about the momentum graph of $X$. We will describe the solution under the restriction that $G$ does not contain any $G_2$-factors.

Friday, October 31
3:15 p.m.
Room 383-N

http://math.stanford.edu/~vakil/seminar0304/