

The Nash blow-up of an algebraic variety is defined to be the parameter space of tangent spaces over the smooth locus together with the limits of tangent spaces over the singular locus. One motivation for studying the Nash blow-up is that its tautological bundle serves as analogue of the tangent bundle for singular varieties. In this talk, I will discuss joint work with W. Slofstra and A. Woo where we compute the Nash blow-up of a cominuscule Schubert variety. We also show that the torus equivariant structure of the Nash blow-up can be studied via Peterson translation on the Schubert variety. Some consequences of our work include a new description of the smooth locus and, for Grassmannian Schubert varieties, a characterization of when the Nash blow-up is a resolution of singularities.