SERGIO DA SILVA, University of Manitoba

On the Gorensteinization of Schubert varieties via boundary divisors

A variety being Gorenstein can be a useful property to have when considering questions in birational geometry. Although Schubert varieties are Cohen-Macaulay, they are not Gorenstein in general. I will describe a convenient way to find a "Gorensteinization" for a Schubert variety by considering only one blow-up along its boundary divisor. We start by reducing to the local question, one involving Kazhdan-Lusztig varieties. These affine varieties can be degenerated to a toric scheme defined using the Stanley-Reisner ideal of a subword complex. The blow-up of this toric scheme along its boundary divisor is Gorenstein, so carefully choosing a degeneration to it extends this result to Schubert varieties in general.