Alexander Woo* (awoo@math.ucdavis.edu), Department of Mathematics, Mathematical Sciences Building, One Shields Avenue, Davis, CA 95616, and Alexander Yong. Local Neighborhoods of Schubert Varieties. Preliminary report.

We use Gröbner bases to compute various invariants of singularities, including multiplicity and Cohen-Macaulay type, at various points of Schubert varieties. A combinatorial notion we introduce and call Bruhat-restricted pattern avoidance gives isomorphisms of local neighborhoods, allowing us to extrapolate values on one Schubert variety to other Schubert varieties. (Received March 08, 2006)