1010-13-103   **Sudhir R Ghorpade*** (`sudhirghorpade@gmail.com`), Department of Mathematics, The University of Tennessee, 1403 Circle Drive, Knoxville, TN 37996, and **K N Raghavan** (`knr@imsc.ernet.in`), Institute of Mathematical Sciences, C.I.T. Campus, Taramani, 600113 Chennai, India. *Hilbert functions of local rings of certain Schubert varieties.*

We consider the problem of determining the multiplicity and more generally, the Hilbert function of the tangent cone at any point of a Schubert variety. We shall review a number of known results, including the conjectures of Kreiman and Lakshmibai which give an explicit combinatorial description of the multiplicity as well as the Hilbert function at points on Schubert varieties in the classical Grassmannian. We then consider the Grassmannian of maximal isotropic subspaces or the symplectic Grassmannian. For points on Schubert varieties in symplectic Grassmannians, we formulate and prove analogues of the conjectures of Kreiman and Lakshmibai. Connections with the theory of determinantal ideals will also be outlined. (Received August 22, 2005)

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